24096
S/186/60/002/006/022/026
A051/A129

Determination of individual yields ....

yield of the chain with A = 139. The relation of the saturation activity for Cs^{139} or Ba^{139} to this sum gives the individual yields of Cs^{139} and Ba^{139}. If the most probable charges for the given chain (Z_p) is computed by the Pappas (Ref. 3: International Conference on the Peaceful Uses of Atomic Energy. Geneva, 7, p. 19. United Nations, N.Y., 1956) method for thermal separation then both values of the individual yields fall on a curve, similar to the curve of charge distribution in thermal separation and shifted relative to it by approximately 0.5 charge units toward the side of large Z. There are 2 figures, and 5 non-Soviet-bloc references. The references to the four most recent English language publications read as follows: N. Sugarman. Radiochemical Studies, Fission Products Nat. Nucl. Energy, Series, Div. IV, 9, paper 170, p. 1139, N.Y. 1951; A. C. Pappas. International Conference on the Peaceful Uses of Atomic Energy, Geneva 7, p. 19. United Nations, N.Y., 1956; A. C. Wahl, Phys. Rev., 99, 3, 730, 1955; S. Raynor. Radiochemical Studies, Fission Products, Nat. Nucl. Energy Series, Div. IV, 9 paper 170, p. 1775, N. Y. (1951).

SUBMITTED: February 4, 9160.

Card 3/4

Determination of individual yields .....

paration products were removed during the irradiation by blowing argon through the solution. The completeness of Xe^{139} removal from the solution was checked by determining the yield of $I^{139} + Xe^{139}$ at various rates of the gas. The author found that foam-formation is absent if there is a layer of a pure organic liquid on the top of the aqueous uranylchloride solution which would not dissolve the uranium. n-butyl alcohol was used enabling the blowing rate of argon to be raised to 2.2 l/min. The separation of Ba^{139} from Cs^{139} was completed within 1.5 - 2 min after the termination of the irradiation. After 90 min elapsed from the end of the irradiation (time sufficient for complete conversion of Cs^{139} to Ba^{139}), a radiochemical purification of three Ba^{139} samples was performed: 1) on Ba^{139} formed directly in the separation together with Ba^{139} formed from Cs^{139} prior to their separation, 2) Ba^{139} formed from Cs^{139} after the separation of Ba^{139}, 3) Ba^{139} formed from $I^{139} + Xe^{139}$. The purification lasted 30 - 60 min and the degree of purification of all the samples was checked from half-life. The saturation activity for Ba^{139}, Cs^{139} and $(Xe^{139} + I^{139})$ was calculated from the figures of the three samples. The calculations were performed by formulae obtained from the usual formulae for successive radioactive transformations, taking the irradiation time into account. The sum of all the activities of saturation was taken as the

24096
S/186/60/002/006/022/026
A051/A129

21.4200

AUTHORS: Krisyuk, I. T.; Lepnev, G. P.; Platunova, N. B.

TITLE: Determination of individual yields of Cs^{139} and Ba^{139} from the separation of U^{238}, using 14 Mev-energy neutrons.

PERIODICAL: Radiokhimiya, v. 2, no. 6, 1960, 743 - 745

TEXT: The authors have developed a method for determining the individual yields of certain fragments by removing the active gases during the irradiation process. The method was checked on a chain with a mass number of 139. the following values of the individual yields were obtained: Ba^{139} (5.6±1.3) %; Cs^{139} (28.6 ± 1.5) %. The A = 139 chain has the following form:
I_{53}^{139}(2.7 sec) ⇌ Xe_{54}^{139}(41 sec) ⇌ Cs_{55}^{139}(9.5 min) ⇌ Ba_{56}^{139}(85 min) ⇌ La_{57}^{139}(stable).
Xenon was removed from the uranium solution during the irradiation and Ba and Cs were rapidly separated at the end of the process. The aqueous solution of uranyl-chloride (3 - 6 g to 5 ml) was irradiated for 1 min with 14 Mev energy neutrons and then placed in the instrument shown in Figure 1. All the formed gaseous se-

Card 1/4

P.R.MONOVA, V.I.; PLATUNOVA, N.B., BAKLANOVSKIY, Ye.O.

Complex formation of uranyl ion with salicylic acid. Part 2. Study of complex formation in solution by the ion exchange method. Radiokhimiia 6 no.5 513-518 '64. (MIRA 18:1)

PARAMONOVA, V.I.; PLATUNOVA, N.B.

Complex formation of an uranyl ion with salicylic acid. Part 3: Study of the composition and regions of occurrence of precipitates formed in salicylate solutions of uranyl. Radiokhimiia 7 no.5:554-563 '65. (MTRA 18:10)

PARAMONOVA, V.I.; PLATUNOVA, N.B.; DUBROVIN, V.A.

Complex formation of uranyl ion with salicylic acid. Part 1. Complex formation in solution studied by spectrophotometry. Koordinatsion. k. (MIRA 18:1)
no.5 505-513 '64.

PETROVA, L.T.; PLATUNOVA, I.A.

Computations performed in the initial class of lists. Trudy Mat.inst. 66:16-36 '62. (MIRA 15:11)
(Electronic calculating machines)

ACCESSION NR: AR4039319

set) and admissible algorithms which revise the lists. The lists can be given as a factural entry or by means of certain operations on known lists. Admissible algorithms are also given either by a factual entry or by means of certain operations on known algorithms. For realizing computations on the machine in the initial class of lists, a system of representation and storage of objects of this class is worked out in the machine's memory, as well as a system of recording computational plans in the given class. Also, a universal program is constructed, which interprets each computational plan, written in the adopted symbolics. The authors cite examples of the representation of the series of expressions in the form of lists, as well as examples of writing down algorithms (for example, a differentiation algorithm). The authors examine in detail an example of analytic computation (the solution of a differential equation by series expansion) described in the list's symbolics and realized on the machine "Strela" by means of a universal program. E. Lukhovitskaya.

DATE ACQ: 22Apr64 SUB CODE: MA ENCL: 00

Card 2/2

ACCESSION NR: AR4039319 S/0044/64/000/003/V086/V086

SOURCE: Ref. zh. Matematika, Abs. 3V486

AUTHOR: Petrova, L. T.; Platunova, I. A.

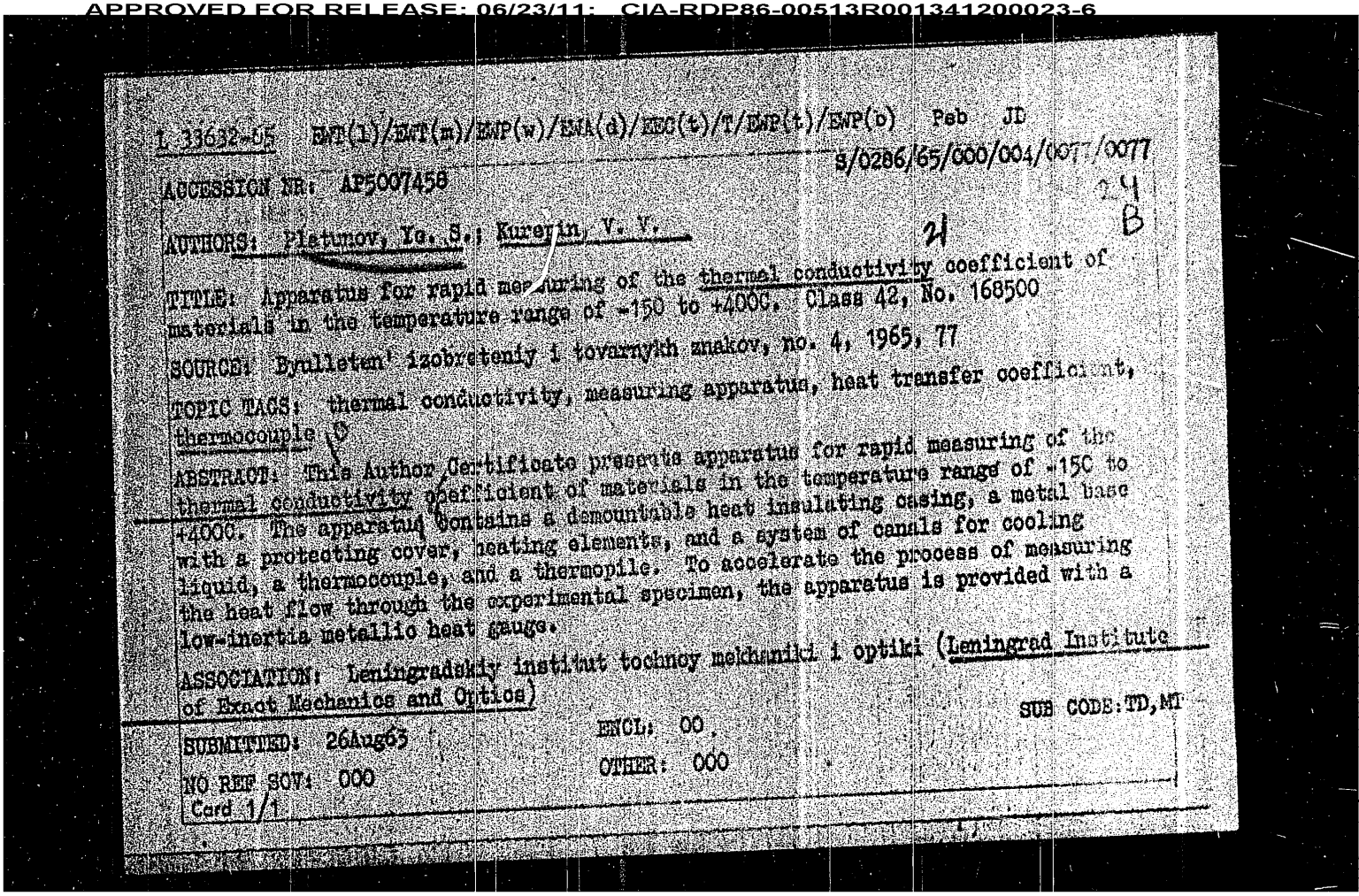
TITLE: The realization, on a machine, of computations in the initial class of lists

CITED SOURCE: Tr. Matem. in-ta. AN SSSR, v. 66, 1962, 16-36

TOPIC TAGS: initial list class, symbolic scheme, algorithm, universal program, differentiation algorithm, series expansion solution, differential equation, analytic computation, Strela

TRANSLATION: The article is devoted to working out a scheme of symbolics, proposed by L. V. Kantorovich and intended to describe different mathematical tasks, for the case where the initial class of objects is the class of lists. The objects of this class are the lists (representing a finite sequence of lines of the form a_{ki}, a_{k2}, ..., a_{kn}, where k = 1, 2, ..., l, and a_{ki} are elements of a certain

Card 1/2



L 33632-65 EWT(l)/EWT(m)/EWP(w)/EWA(d)/EEC(t)/T/EWP(t)/EWP(b) Pab JD
S/0286/65/000/004/0077/0077

ACCESSION NR: AP5007458

AUTHORS: Platunov, Ye. S.; Kurepin, V. V.

TITLE: Apparatus for rapid measuring of the thermal conductivity coefficient of materials in the temperature range of -150 to +400C. Class 42, No. 168500

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 77

TOPIC TAGS: thermal conductivity, measuring apparatus, heat transfer coefficient, thermocouple

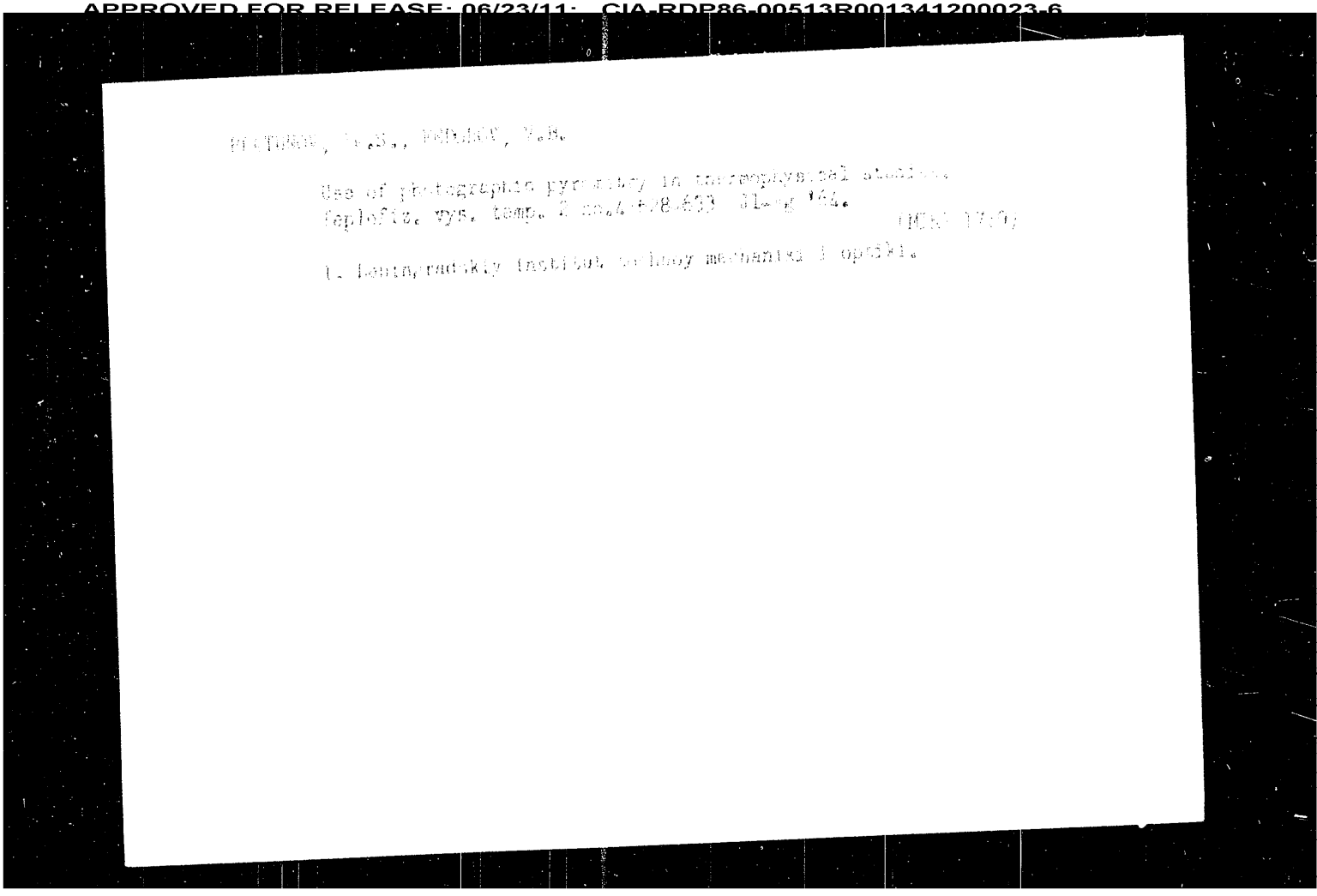
ABSTRACT: This Author Certificate presents apparatus for rapid measuring of the thermal conductivity coefficient of materials in the temperature range of -150 to +400C. The apparatus contains a demountable heat insulating casing, a metal base with a protecting cover, heating elements, and a system of canals for cooling liquid, a thermocouple, and a thermopile. To accelerate the process of measuring the heat flow through the experimental specimen, the apparatus is provided with a low-inertia metallic heat gauge.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Exact Mechanics and Optics)

SUBMITTED: 26Aug63 ENCL: 00 SUB CODE: TD, MT

NO REF SOV: 000 OTHER: 000

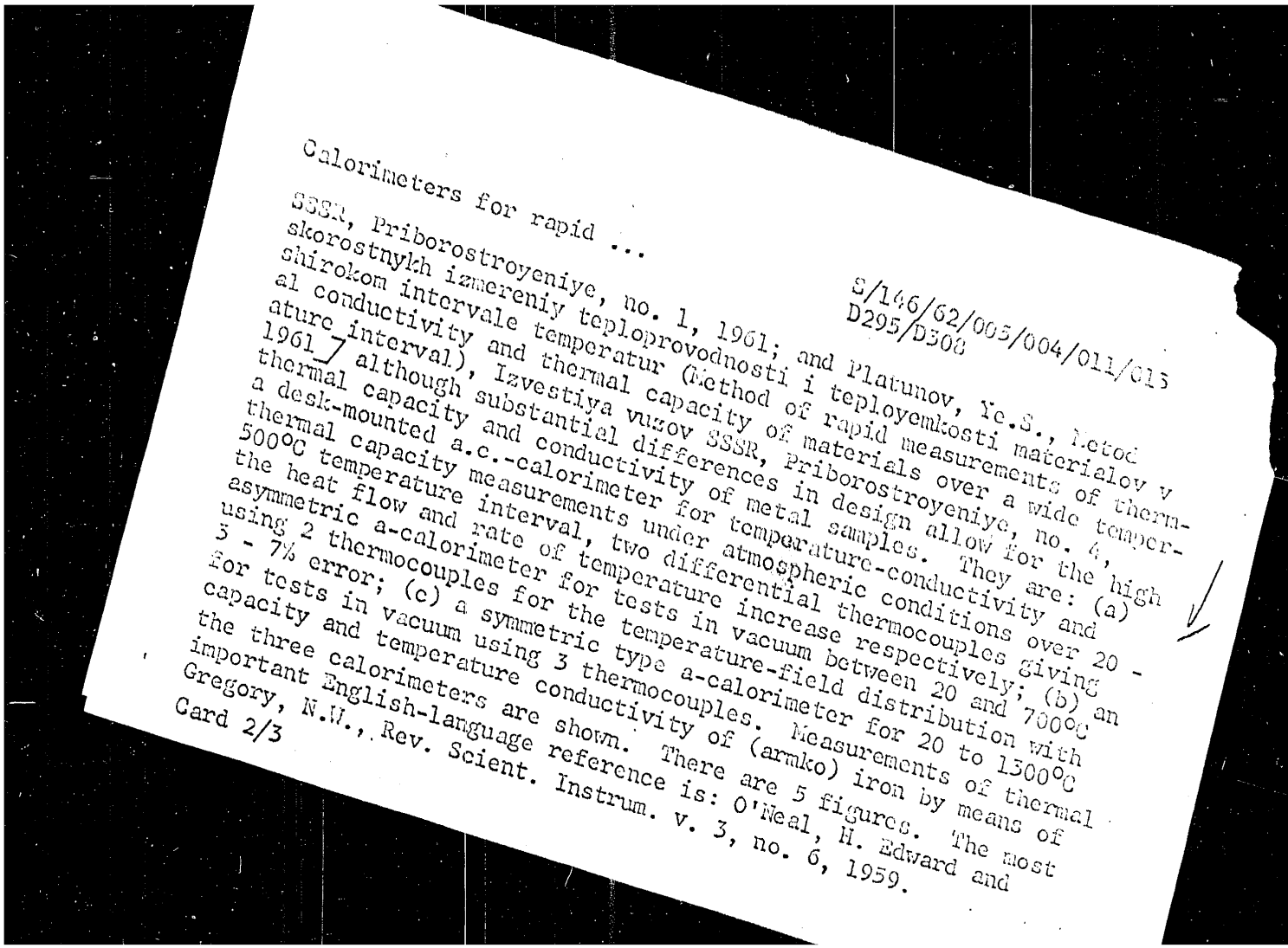
Card 1/1



KUREPIN, V.V.; PLATUNOV, Ye.S.

Device for rapid thermophysical testing of heat-insulating and semiconductor materials in a wide temperature range (dynamic -calorimeter). Izv.vys.ucheb.zav.; prib. 4 no.5:119-126 '61. (MIRA 14:10)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy teplovykh i kontrol'no-izmeritel'nykh priborov.
(Calorimeters)



Calorimeters for rapid ...

S/146/62/005/004/011/015
D295/D308

SSSR, Priborostroyeniye, no. 1, 1961; and Platunov, Ye.S., Metod skorostnykh izmereniy teploprovodnosti i teployemkosti materialov v shirokom intervale temperatur (Method of rapid measurements of thermal conductivity and thermal capacity of materials over a wide temperature interval), Izvestiya vuzov SSSR, priborostroyeniye, no. 4, 1961 7 although substantial differences in design allow for the high thermal capacity and conductivity of metal samples. They are: (a) a desk-mounted a.c.-calorimeter for temperature-conductivity and thermal capacity measurements under atmospheric conditions over 20 - 500°C temperature interval, two differential thermocouples giving the heat flow and rate of temperature increase respectively; (b) an asymmetric a-calorimeter for tests in vacuum between 20 and 700°C using 2 thermocouples for the temperature-field distribution with 3 - 7% error; (c) a symmetric type a-calorimeter for 20 to 1300°C for tests in vacuum using 3 thermocouples. Measurements of thermal capacity and temperature conductivity of (armko) iron by means of the three calorimeters are shown. There are 5 figures. The most important English-language reference is: O'Neal, H. Edward and Gregory, N.W., Rev. Scient. Instrum. v. 3, no. 6, 1959.

Card 2/3

S/146/62/005/004/011/013
D295/D308

AUTHOR: Levkovich, L.V. and Platunov, Ye.S.

TITLE: Calorimeters for rapid thermophysical tests of metals over a wide temperature interval

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 4, 1962, 85-93

TEXT: A review of existing calorimetric methods for the determination of one or several thermal parameters by subjecting the tested substance to monotonic heating or cooling over a wide temperature interval reveals the lack of equipment of such type suitable for large-scale industrial application. Three new calorimeters for testing metals and metal alloys are described, the theory of which is based on Refs. 9 and 10 (Platunov, Ye.S., Metod skorostnogo izmereniya temperaturoprovodnosti teploizolatsionnykh i poluprovodnikovykh materialov v shirokom intervale temperatur (Method of rapid measurement of temperature conductivity of thermo-insulating and semiconductor materials over a wide temperature range), Izv. vuzov

Card 1/3

PLATUNOV, Ye.S.

Rapid determination of the temperature dependence of heat conductivity of fibrous and loose materials. Izv.vys.ucheb. zav.; prib. 5 no.1:110-117 '62. (MIRA 15:2)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy teplovykh priborov.
(Heat-conduction)
(Insulation (Heat))

DUL'NEV, G.N.; OLEYNIK, B.N.; PLATUNOV, Ye.S.

Present status and basic objectives of the thermal instrument industry. Izv.vys.ucheb.zav.; prib. 4 no.6:124-131 '61.
(MIRA 14:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy teplovykh i kontrol'no-izmeritel'nykh priborov.

(Thermometry--Equipment and supplies)

Local heat-transfer coefficients ... S/589/62/000/063/010/021
E032/E514

found that the local heat-transfer coefficients for the six faces of the parallelepiped are proportional to the thermal conductivity and inversely proportional to the lengths of the corresponding sides of the body. In addition, the expressions for the coefficients involve six constants of integration. A procedure is then outlined of how these constants can be determined experimentally. The analysis is repeated for a cylinder of circular cross-section. In the second part of this work the theoretical expressions were verified for specially prepared gypsum specimens in the form of rectangular parallelepipeds and finite cylinders. The mean heat-transfer coefficients were determined with the aid of brass Kondrat'yev α-calorimeters. The local heat-transfer coefficients were determined at room temperature under conditions of natural convection and also in a forced air stream. Detailed numerical results are reproduced in the form of tables. There are 2 figures and 2 tables.

ASSOCIATION: VNIIM

SUBMITTED: December 30, 1960

Card 3/3

transfer coefficients for simple geometrical forms and to consider their practical application to experimental methods of determination of the thermophysical properties of isotropic and anisotropic materials. In the first section a derivation is given of expressions for the local heat-transfer coefficients in the case of a parallelepiped, assuming that they remain constant over each individual face but differ from face to face. Moreover, the local heat-transfer coefficients are assumed to be independent of the temperature difference between the parallelepiped and the surrounding medium. To do this, the solution of the heat-transfer equation is sought in the form

$$\vartheta(x,y,z,\tau) = AU(x,y,z)\, e^{-m\tau}, \qquad (4)$$

subject to the boundary conditions

$$\left[\frac{\partial U(x,y,z)}{\partial n} + \frac{\alpha_i}{\lambda} U(x,y,z)\right]_i = 0 \qquad (6)$$

where λ is the thermal conductivity, α_i are the local heat-transfer coefficients and $\partial/\partial n$ represents differentiation along the inward normal of the facesi = x, -x, y, -y, z, -z. It is

S/589/62/000/063/010/021
E032/E514

AUTHORS: Oleynik, B.N. and Platunov, Ye.S.

TITLE: Local heat-transfer coefficients for bodies of simple geometrical form

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta, no.63(123). Moscow, 1962. Issledovaniya v oblasti teplovykh i temperaturnykh izmereniy. 131-142

TEXT: It is pointed out that because of mathematical difficulties most heat-transfer problems are at present solved on the assumption that the heat-transfer coefficient is independent of the coordinates of points on the surface of the body under investigation. However, in special simple cases it is possible to improve the accuracy of the mathematical analysis by introducing local heat-transfer coefficients (razdel'nyye koeffitsienty teploobmena). These coefficients were originally used by Konrat'yev (Regulyarnyy teplovoy rezhim [Regular heat transfer], Gostekhizdat, 1954). The aim of the present paper was to produce a systematic account of studies of the local heat-

Card 1/3

REGUNKOVA, A.F.; DUL'NEV, G.N.; PLATUNOV, Ye.S.; SEMYASHKIN, E.M.; CHERKASOV, V.N.; YARYSHEV, N.A.

Regular thermal conditions for solids of complex shape. Inzh.-fiz. zhur. 5 no.4:122-126 Ap '62. (MIRA 15:4)

1. Institut tochnoy mekhaniki i optiki, Leningrad.
(Thermodynamics)

S/862/62/001/000/001/012
E032/E314

AUTHORS: Begunkova, A.F., Dul'nev, G.N. and Platunov, Ye.S.

TITLE: Instruments developed at LITMO for thermophysical measurements

SOURCE: Teplo- i massoperenos. t. 1: Teplofizicheskiye kharakteristiki materialov i metody ikh opredeleniya. Ed. by A. V. Lykov and B. M. Smol'skiy. Minsk, Izd-vo AN BSSR, 1962. 3 - 10

TEXT: Instruments and apparatus developed between 1953 and 1960 at the Leningrad Institute for Precision Mechanics and Optics are reviewed. The first group of instruments is designed for thermophysical measurements on thermally insulating and constructional materials at room temperatures. They are based on the regular temperature variation methods developed by Professor G.M. Kondrat'yev (Teplovyye izmereniya (Thermal measurements), Mashgiz, 1957). The second group includes apparatus also based on Kondrat'yev's theories and used in rapid determinations of the temperature-dependence of various thermophysical characteristics of materials between -100 and 1 100 °C. Only very general descriptions are

Card 1/2

OLEYNIK, B.N.; PLATUNOV, Ye.S.

Separate coefficients of heat exchange for solids with a simple geometrical shape. Trudy inst.Kom.stand., mer i izm.prib. no.63:131-142 '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I.Mendeleyeva.

(Heat--Transmission)

LEKOVICH, L.V.; PLATUNOV, Ye.S.

Calorimeters for high-speed thermophysical testing of metals in wide temperature ranges. Izv.vys.ucheb.zav.; prib. 5 no.4:85-93 '62. (MIRA 15:9)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy teplovykh i kontrol'no-izmeritel'nykh priborov.

(Metals--Thermal properties--Testing)
(Calorimeters)

BEGUNKOVA, A. F.; DUL'NEV, G. N.; PLATUNOV, Ye. S.

Instruments for thermophysical measurements designed by the Leningrad Institute of Precision Mechanics and Optics. Teplo- i massoper. 1:3-10 '62. (MIRA 16:1)

1. Leningradskiy institut tochnoy mekhaniki i optiki.

(Calorimeters)

ENCLOSURE: 01

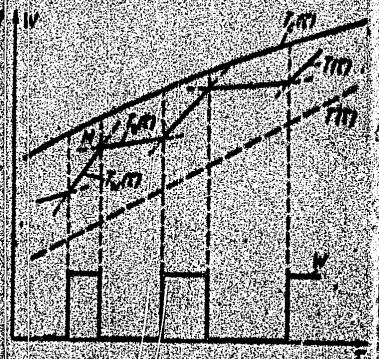
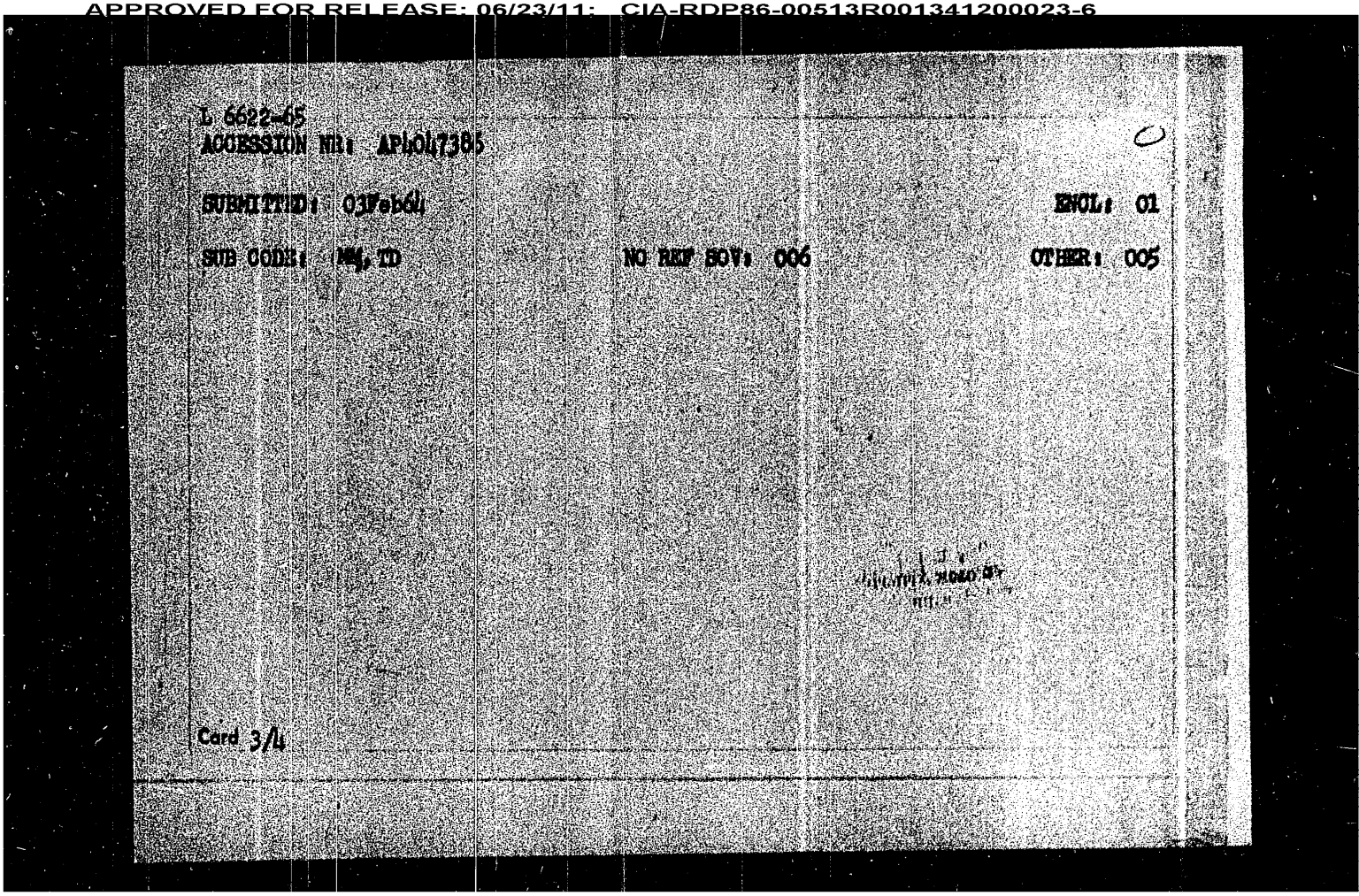


Fig. 1. Graph of pulse-heated specimen within a shell of constant temperature growth.



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ACCESSION NR: AP4047385

SUBMITTED: 03Feb64 ENCL: 01

SUB CODE: MM, TD NO REF SOV: 006 OTHER: 005

Card 3/4

L 6621-65
ACCESSION NR: AP5047386

$$cm\left[b_{0,0}-\left(\frac{d\theta}{d\tau}\right)_0\right]=\varepsilon_{\pi}\sigma_0 F\left(T_{c,0}^4-T_0^4\right)+\alpha F\left(T_{c,0}-T_0\right),$$

$$cm\left[b_{c,w}-\left(\frac{d\theta}{d\tau}\right)_w\right]=W+\varepsilon_{\pi}\sigma_0 F\left(T_{c,w}^4-T_w^4\right)+\alpha F\left(T_{c,w}-T_w\right),$$

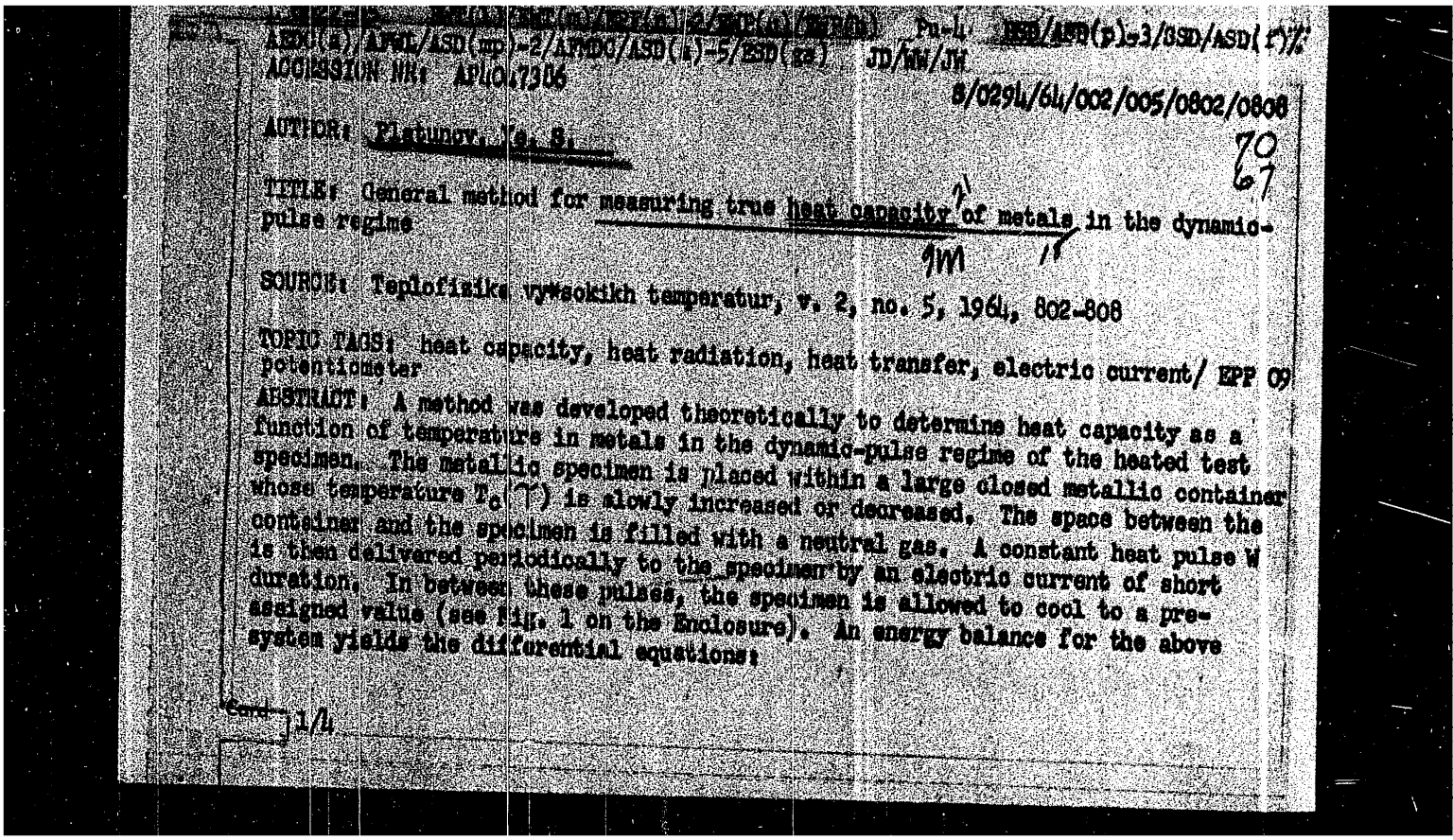
where subscripts 0 and W refer to heat pulse "off" and "on" conditions respectively, $(\theta)=T_c(\tau)-T(\tau)$ and b_0, b_W - cooling and heating rate. This leads to an expression for the heat capacity c given by

$$c=\frac{W+\Delta W_b}{m\left[\left(\frac{d\theta}{d\tau}\right)_0-\left(\frac{d\theta}{d\tau}\right)_W-\Delta b_{W,0}\right]}.$$

This result was verified experimentally for industrial copper and Armco-iron specimens in the temperature range 20-1000C where C was determined with an accuracy between 3 to 5 percent. "The experimental part of this analysis was carried out with the help of N. V. Uspenskaya and S. Ye. Burevoy." Orig. art. has: 14 formulas and 4 figures.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

Card 2/4



AEDC(a)/AFWL/ASD(mp)-2/AFMDC/ASD(a)-5/ESD(gs) Pu-4 ESD/AEC(p)-3/ESD/ASD(f)/JD/WW/JW

ACCESSION NR: AP4047306 S/0294/64/002/005/0802/0808

AUTHOR: Platunov, Ye. S.

TITLE: General method for measuring true heat capacity of metals in the dynamic-pulse regime

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 5, 1964, 802-808

TOPIC TAGS: heat capacity, heat radiation, heat transfer, electric current/ EPP 09 potentiometer

ABSTRACT: A method was developed theoretically to determine heat capacity as a function of temperature in metals in the dynamic-pulse regime of the heated test specimen. The metallic specimen is placed within a large closed metallic container whose temperature T_c (T) is slowly increased or decreased. The space between the container and the specimen is filled with a neutral gas. A constant heat pulse W is then delivered periodically to the specimen by an electric current of short duration. In between these pulses, the specimen is allowed to cool to a pre-assigned value (see fig. 1 on the Enclosure). An energy balance for the above system yields the differential equations:

Card 1/4

ABSTRACT: Errors in measurements of [illegible] temperature. The methods employed (thermoelectric, visual, photoelectric, and photographic) are not of equal value. The authors discuss briefly some inadequacies of various methods. They believe that the photographic method offers the greatest promise. This method reduces chiefly to measuring the luminosity of an investigated light source on the surface of a photographic plate sensitive to a narrow spectral band. Evaluation involves comparison of the density of an image produced on the film by a standard source (temperature lamp) with the density produced by the investigated object. The proper narrow segment of the spectrum is selected by means of a filter. The authors used a Konvas-A movie camera for their work, in combination with AM-1 film. The method was tested by investigation of the thermal

Card 1/2

PLATUNOV, Ye.S.

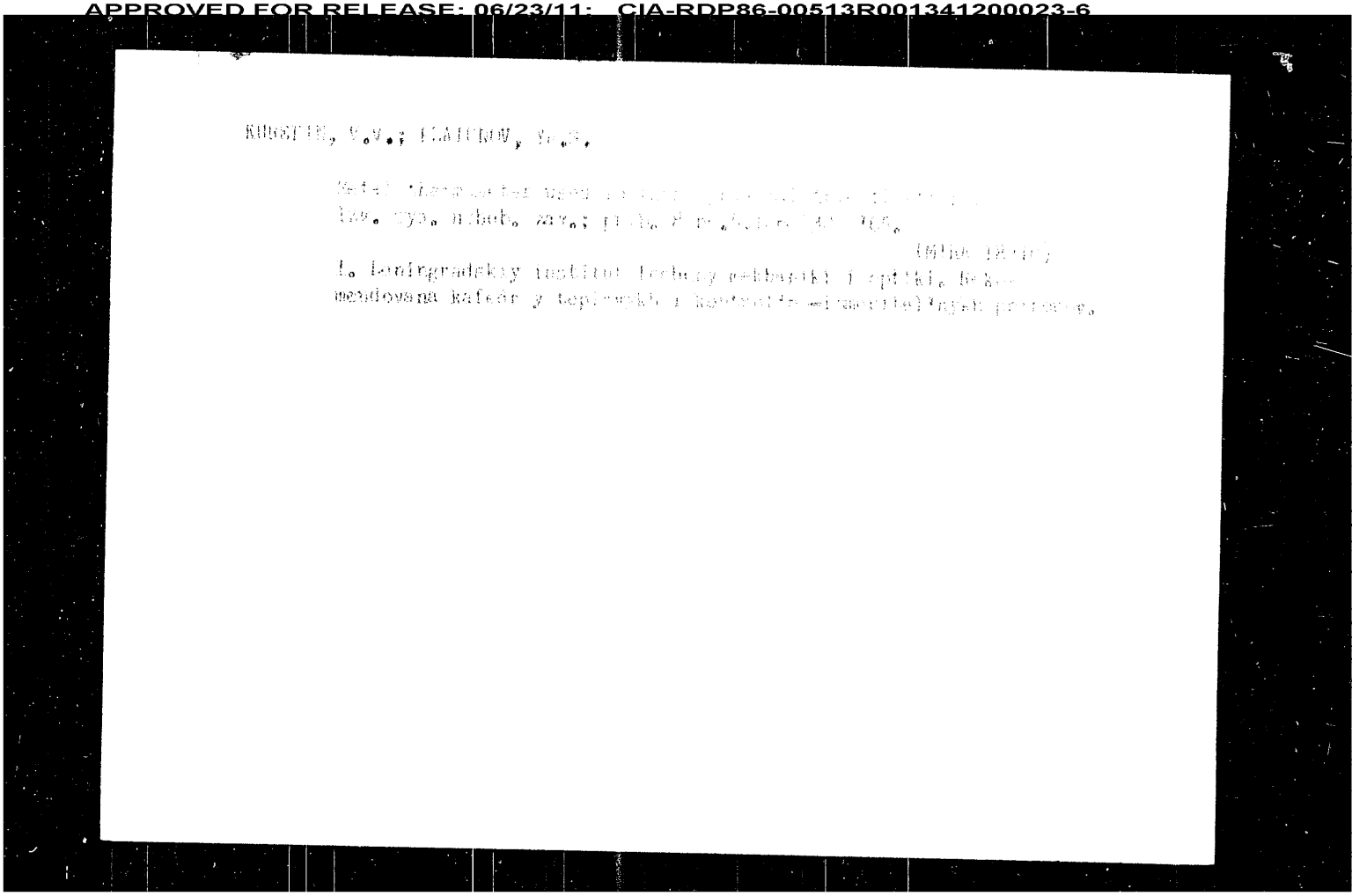
Generalized method for measuring the true heat capacity of metals in a pulse-dynamic mode of operation. Teplofiz. vys. temp. 2 no.5: 802-808 S-O '64. (MIRA 17:11)

1. Leningradskiy institut tochnoy mekhaniki i optiki.

PLATUNOV, Ye.S.

Temperature regulation conditions in a steady heating of hollow shaped bodies with variable thermophysical parameters. Izv.vys.ucheb.zav.; prib. 7 no.5:135-140 '64. (MIRA 17:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovano kafedroy teplovykh i kontrol'no-izmeritel'nykh priborov.



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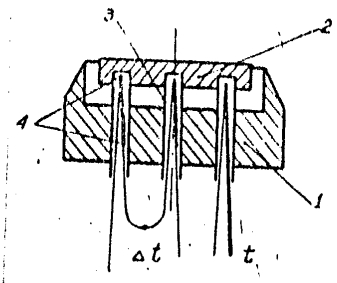
ACC NR: AP6009181



consists of heat-resistant metal parts; its base 1 and contact plate 2 are rigidly connected (pressed or welded) by a few tubes 3. The tubes serve as a specified thermal connection between 1 and 2 and also house simple or differential thermocouples and a thermopile. The new meter was tested in measuring the thermal conductance of molten quartz and plexiglas. After one year of continuous operation, the new meters practically did not change their calibration and retained their maximum error of ± 5% in measuring coefficients of thermal conductance. Orig. art. has: 2 figures and 6 formulas.

SUB CODE: 13, 09 / SUBM DATE: 25May64 / ORIG REF: 004

Card 2/2 vmb

L 34863-66 EWT(d)/EWT(l)/EWP(e)/EWT(m)/EWP(v)/EWP(j)/T/EWP(t)/ETI/EWP(k)/EWP(h)/
ACC NR: AP5009181 EWP(l) SOURCE CODE: UR/0146/65/008/005/0126/0130
IJP(c)
JD/WW/JG/RM/WH

AUTHOR: Kurepin, V. V.; Platunov, Ye. S.

ORG: Leningrad Institute of Fine Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki)

TITLE: Metal heat-flow meter for thermophysical studies

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 5, 1965, 126-130

TOPIC TAGS: heat flux pickup, heat measurement

ABSTRACT: Existing heat-flow meters have a heat-insulation base which does not permit efficient leveling of temperature field in the work surfaces of the specimen, nor can such meters be used for simultaneous measurement of contact-surface temperature. Hence, a new heat-flow meter is suggested which has a metal base and is free from the above shortcomings. The new meter (see figure)

Card 1/2 UDC: 636.2.083

L 42294-66 EWT(1) WW

ACC NR: AP6022065 SOURCE CODE: UR/0146/66/009/003/0127/0130

44
B

AUTHOR: Kurepin, V. V.; Platunov, Ye. S.

ORG: Leningrad Institute for Precise Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki)

TITLE: Instruments for investi,ating thermal diffusivity and heat capacity with monotonic heating

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 3, 1966, 127-130

TOPIC TAGS: thermal diffusivity, heat capacity, calorimeter

ABSTRACT: The article describes two new pieces of apparatus which are modifications of types previously described in the literature. In the first calorimeter for measuring the thermal diffusivity, the samples are disks with a diameter $2R = 15$ mm, the height of which is taken from the condition $2\ell = (10\text{-}20) \times \sqrt{\tau}$, and is usually from 4-12 mm. In the second calorimeter, for measuring the heat capacity, the samples are rods with a diameter of 15 mm and a height of 24 mm. Diagrams of both calorimeters are given. Calculating formulas are given for the use of both pieces of apparatus. Orig. art. has: 2 formulas and 2 figures.

SUB CODE: 20/ SUBM DATE: 30Mar65/ ORIG REF: 006

Card 1/1 UDC: 536.629

L 45666-66

ACC NR: AP6021221

greatest deviation of the mean values (solid curves) from the curves cited by the *Handbook of Thermophysical Properties of Solid Materials*, Pergamon Press, 1961 and V. Ya. Chekhovskoy *Teplofizika vysokikh temperatur*, 2, No 2, 1964 occurs at highest temperatures where the corrections are most significant. Orig. art. has: 4 figures, 2 formulas.

SUB CODE: 20/ SUBM DATE: 09Feb64/ ORIG REF: 003/ OTH REF: 001

Card 2/2 fv

L 45666-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI JD/WW/WH

ACC NR: AP6021221 SOURCE CODE: UR/0294/66/004/003/0459/0462

AUTHOR: Buravoy, S. Ye.; Platunov, Ye. S.

ORG: Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki)

TITLE: Apparatus for measuring true heat capacity of fireproof materials in a cooling regime

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 3, 1966, 459-462

TOPIC TAGS: fire resistant material, calorimetry, measuring apparatus

ABSTRACT: The testing apparatus and results of measurements of the heat capacities of fireproof materials in the 1200° to 2300°K range are described. The main elements of the apparatus are the vacuum chamber with black inside walls, heating element, fast response radiation calorimeter and mounts for the cylindrical samples. The sample is heated to the desired temperature and left to cool freely to room temperature while the measurements are made. Calculations determined that the sample radius should not exceed 25 mm, 15 mm, and 9 mm for metals and metal alloys, various types of graphite, and ceramics, respectively. Cylinder length should be about 150 mm, with testing length of 50 mm. The measuring device was calibrated statically. The test results for Al_2O_3 and graphite are graphed. The errors do not exceed 6-8% of measured values. The

UDC: 536.631:536.45

Card 1/2

S/170/62/005/004/013/016
B104/B102

AUTHORS: Begunkova, A. F., Dul'nev, G. N., Platunov, Ye. S., Semyashkin, E. M., Cherkasov, V. N., Yaryshev, N. A.

TITLE: Normal thermal conditions of bodies of complex shape

PERIODICAL: Inzhenerno-fizicheskiy zhurnal. v. 5, no. 4, 1962, 122 - 126

TEXT: In the "Inzhenerno-fizicheskiy zhurnal", no. 8, 1961, a paper by G. N. Tret'yachenko and L. V. Kravchuk entitled "Normal thermal conditions of complex bodies" was published. In this paper, some "fundamental errors" of the founder of the theory of normal thermal conditons, G. M. Kondrat'yev and his followers, are pointed out. In the present paper, some assumptions of the theory set up by Kondrat'yev are explained, and it is shown that the authors of the paper mentioned misunderstood the term "normal thermal conditions". This is discussed in detail by citing the corresponding passages of the text and by using the symbols introduced there. There are 8 Soviet references.

Card 1/2

The present state of ...

temperatures; 6) convene an All-Union conference no later than in 1963 to debate the methods and instruments for thermophysical experiments. This article was recommended by the Kafedra teplovykh i kontrol'no-izmeritel'nykh priborov (Department of Thermal and Control-Measuring Instruments). There are 56 references: 42 Soviet-bloc and 14 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: W. H. Sutton, J. Amer. Ceram. Soc., v. 43, no. 2, (1960); C. L. Langmuir, Rev. Scient. Instrum., v. 98, no. 11, (1957); W. E. Haupin, Amer. Ceram. Soc. Bull., v. 39, no. 3, (1960); Taga Masao, Trans. Japan Soc. Mech. Eng., (1959), 25, no. 160, 1274-1281.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: June 19, 1961

Card 4/4

S/146/61/004/006/016/020
D221/D301

The present state of ...

Institute developed methods for measuring the ideal heat capacity and for determining thermal conductivity of hard insulators and thin films. The authors stress the lack of industrial instruments for the above. The absence of unified measurements is a major drawback in perfecting instruments. The Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva (All-Union Scientific Research Institute of Metrology im. D. I. Mendeleev) is at present engaged in solving this problem. A reference is made to USA and England where the National Laboratories offer standard samples of substances. The Leningrad Institute of Precision Mechanics and Optics organized in December 1960 the second conference of schools of higher education to examine methods and instruments for measuring the thermophysical properties of materials. The conference made the following resolutions: 1) Concentrate at the Mendeleyev Institute work on prototypes; 2) subject to a state examination the instruments intended for industrial manufacture; 3) form a commission for thermophysical measurements as the coordinating center; 4) establish a design office and prototype production for instruments; 5) foster research in the field of high

Card 3/4

The present state of ...

of heating and cooling; these are designated as regular regime methods of the second kind or quasi-stationary methods. The other group contains investigations in conditions of monotonic heating or cooling, and these are designated as dynamic methods or methods of continuous heating. The theoretical investigations of G. P. Ivantsov, A. V. Lykov and G. M. Kondrat'yev form the basis of the first group. These methods were studied by M. Sh. Yagfarov and L. I. Semenov. The methods of the second group were developed at the beginning of 1950. Yu. P. Barskiy at NIIstroykeramika has worked since 1950 on determining the thermophysical properties of materials by measuring the variable heat flow with a diathermal sheet. These methods are now mastered for temperatures up to 1200°C. O. N. Krayev at MIFI developed, during 1954-1958, methods of measuring the thermal conductivity of metallic and granulated heat insulating materials and the heat conductivity of fluids. These are based on simplified laws of monotonic heating of the specimen between 20 - 700°C. From 1953, the Leningradkiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics) carried out investigations on transient temperature fields. Tr-

Card 2/4

S/146/61/004/006/016/020
D221/D301

AUTHORS: Dul'nev, G. N., Oleynik, B. N. and Platunov, Ye. S.

TITLE: The present state of and the main problems in thermal instrument design

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 6, 1961, 124-131

TEXT: According to the suitability of a method for obtaining the temperature from one experiment, the existing methods can be divided into two categories. The first comprises practically all stationary methods of measuring the heat conductivity except the axial flow in metals; all methods of the regular regime of the first kind (but not the microcalorimeter method); all methods of temperature waves; pulse, probe, mixing and other methods. These are not generally suitable for mass measurements. The second category includes experiments with continuous heating or cooling of specimens over a wide range of temperatures, and may be subdivided into two groups. One embraces tests with a rigorously linear law

Card 1/4

A device for high-speed...

where $\Delta\tau_{o,\delta}(t)$ and $\Delta\tau_{o-\delta}(t)$ are time temperature drops determined during the experiments. The correction factor $\Delta\xi_a(t)$, is usually less than 3% of the denominator, and approximate data on heat capacity of the tested material are sufficient for its calculation. The instrument was checked on plates of optically pure quartz. The values obtained on the instrument were compared with established data; the difference did not exceed 3%. The instrument is recommended for mass tests of thermo-physical properties of solid and elastic materials whose heat conductivity is below 10 vt/m. degree. This article was recommended by the Kafedra teplovykh i kontrol'no-izmeritel'nykh priborov (Department of Thermal and Control-Measuring Instruments). There are 4 figures and 4 Soviet-bloc references.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: February 27, 1961

Card 3/3

A device for high-speed...

plates. The conjugated surfaces of the bases and the plates are ground. Two thermocouples are fixed within the facing surfaces of the base, one is placed between the plates. A system of water cooling is applied for the thermostatic control of external surfaces of calorimeters. The signals from thermocouples are measured by a potentiometer, the zero indication is given by a mirror galvanometer. The supply is ensured by a drop-down transformer, and a rheostatic control is provided for the heating elements of the calorimeters. The heat conductivity is determined by an equation which takes into account the thickness and the area of tested plates, average temperature during period τ, and other factors, including a correction coefficient. Some parameters are constants of the instrument. One $\lambda(t_c)$, is to be calculated analytically. The factor of the total heat resistance $R_c(t_n)$, depends on the type of contact lubricant used, and is determined by preliminary calibration. The temperature conductivity is calculated by

$$a(t) = \frac{\delta^2}{\Delta\tau_{0,\delta}(t) + \tau A_{b-\delta}(t) - \Delta\xi_a(t)}, \qquad (3)$$

Card 2/3

30484
S/146/61/004/005/009/011
D221/D305

15.2630

AUTHORS: Kurepin, V.V. and Platunov, Ye.S.

TITLE: A device for high-speed wide-range thermo-physical tests of heat insulating and semi-conductor materials (a dynamical a λ-calorimeter)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 5, 1961, 119-126

TEXT: The measurements take place in conditions of dynamic heating of specimens. The instrument consists of three main parts: λ-calorimeter for tests of heat conductivity, a - calorimeter for tests of temperature conductivity and a measuring panel. The λ-calorimeter contains a rod which forms the standard of heat capacity. The plate which is tested is placed between this rod and the base. The standard is made of Armco iron; its contact surfaces are ground. Thermocouples with "khromel'" and "alyumel'" electrodes are mounted at three points. The a-calorimeter has two identical

Card 1/3

A method for the rapid measurement ...

$$C_c = \frac{1}{P_c} \cdot \left(\frac{\lambda_k S_n}{\delta_n} \cdot \Delta\tau_n - \frac{1}{2} c_n \cdot P_n - A \cdot \Delta\tau_{c-k}\right) \qquad (20)$$

can be used, where $\delta_n/\lambda_n = R_n$ - heat resistance of plate, S_n area of sample; $\Delta\tau_n$ - instaneous temperature step in the plate, C_c - specific thermal capacitance of the rod; P_c - weight of rod, c_n - specific thermal capacity of plate; p_n - weight of plate; $\Delta\tau_{c-k}$ - instantaneous value of mean surface temperatures of the rod and cowl; R_k - contact thermal resistance; A - correction factor. The method can be successfully used with liquids and powders. This article was recommended by the Kafedra teplovykh i kontrol'no-izmeritel'nykh priborov (Department of Thermal and Control-Measuring Instruments). There are 3 figures and 7 Soviet-bloc references.

ASSOCIATION: Leningradskiy institut tochnoy meknaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: January 21, 1961

Card 3/3

very good thermal insulation. The formulae for the heat resistance and capacity are derived under several simplifying assumptions as to the temperature gradients and thermal capacity of the standard. In determining the total volume of the calorimeter the Veynik principle is used. The method has been experimentally tried on several laboratory models. The thermal conductivity was measured within the temperature range - 80 to 400°C the following materials being analyzed: Fused quartz, window glass, plexiglass, ebonite, mica, PTFE, various semi-conductor materials, films and fabrics. The reproducibility of results was 2-3 %. The maximum discrepancies with data for well analyzed materials, such as fused quartz and plexiglass did not exceed 5 %. The thermal capacity of metals could be reproduced within ± 5 % for 20 - 500°C. All experiments were carried out with the temperature increasing at the rate 200-1000° per hour. In most cases formulae

$$\frac{\delta_n}{\lambda_n} = \frac{S_n \cdot \Delta\tau_n}{(c_c \cdot P_c + \frac{1}{2} c_n P_n) + A \cdot \Delta\tau_c - k} - R_k; \qquad (19)$$

29648
S/146/61/004/004/012/015
D201/D306

24 5500

AUTHOR: Platunov, Ye.S.

TITLE: A method for the rapid measurement of thermal conductivity and capacity of materials within a wide range of temperatures

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 4, 1961, 90 - 97

TEXT: The instrument is called a λ-calorimeter or c-calorimeter. The main parts of the instrument are a thin plate, a bar and a metal bloc which consists of a relatively heavy base and a thin cowl. The plate with the bar on top of it is tightly fixed on the base surface, the cowl covering it with a certain gap. All the above parts are in good thermal contact where required. When the device is used as a λ-calorimeter, the bar is used as the standard of thermal capacity. In a c-calorimeter the bar is the sample under analysis and the plate (or part of it) is used as a standard of heat resistance. The calorimeter is heated by an electric element and has

Card 1/3

ACCESSION NR: AP4042463

constant cross section $l/d > 20$ placed inside a tube-heater. Heating is achieved by ohmic currents and the heat balance equation gives for c(T)

$$c(T) = \{W(T_\tau) - [W_p(T_\tau) - C_\tau(dT_\tau/d\tau)]\} / P(dT/d\tau).$$

The first method allows temperature levels as high as 2500C, the second, to 1500C. Measurements in c(T) are accurate to within 5-10%. To measure $\lambda(T)$ the assumption is made that $l/d \gg 1$, ΔT along the rod length x does not exceed 50-150C, and physical parameters of the rod vary inversely as T. The unsteady heat flow equation then yields

$$c\gamma b = -\lambda \frac{d^2\vartheta}{dx^2} + j^2\rho - \varepsilon\sigma_0 \frac{\Pi}{S}[(T_0^4 - T_c^4) - 4T_0^3\vartheta],$$

with solution at the midsection given by

$$\vartheta(x, \tau) = \frac{x^2}{2\lambda}\left(j^2\rho - \varepsilon\sigma_0 \frac{\Pi}{S} T_0^4 - c\gamma b\right)$$

where Π - perimeter and S- area of rod. This equation is then adapted to a rod of circular cross section and an estimate is made of radial temperature drop. For a 20% error in radial temperature estimates, the above equation predicts λ with an error of less than ±3%. Orig. art. has: 13 formulas.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute

Card 2/3

ACCESSION NR: AP4042463 S/0294/64/002/003/0378/0383

AUTHOR: Platunov, Ye. S.

TITLE: Heat capacity and thermal conductivity measurements in rods under monotonic heating and cooling

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 3, 1964, 378-383

TOPIC TAGS: heat capacity, thermal conductivity, ohmic current, heating, cooling, heat source, circular rod, heat balance equation

ABSTRACT: Two methods were used to determine the heat capacity c(T) and thermal conductivity $\lambda(T)$ of metals and nonmetals at temperatures above 1000C. Method one utilized long thin bands or spirals of constant cross sections in vacuum (or in a chamber filled with single component gas at room temperature). The specimen is heated by ohmic currents to the highest possible temperatures and subsequently cooled by turning off the current flow. The general expression for c(T) then yields

$$c(T) = (W_n - W_0) \cdot [P(|dT/d\tau|_n + |dT/d\tau|_0)]^{-1},$$

where subscripts H and O refer to heating and cooling, respectively, P- specimen mass, W- thermal energy of heat source. The second method uses circular rods of

Card 1/3

measurements the overall combined error is reduced and amounts to

Card 3/6

28953
S/146/61/004/003/002/013
Automatic electronic potentiometer ... D217/D301

$\pm 0.02 \cdot [1 + 0.05(E_1 - E_2)]$ mV. There are 3 figures and 1 Soviet-bloc reference.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: December 27, 1960

Card 4/6

Automatic electronic potentiometer ...

the circuit diagram and Figure 2 the recording mechanism of the instrument. The resistors R_1, R_2, R_3 and R_4 are similar to those used in the EPP-09, and are so chosen that the voltage drop across the resistance wire, R_p, is 2.1 mV and the potential of the point A_H with respect to the terminals b_1, b_2, ..., b_{24} is 0.2, ... 46mV respectively. The terminals C_1, C_2, ..., C_{24} are connected to the rotary switch, S_r, whose moving arm is fixed on the same shaft as the reversible motor DAT-1 (EDG-1), reduction gearbox P, position lock mechanism L, and brake T. The time necessary to change the position of contact of the switch S_r is 0.25 sec. The motor is brought into operation by closing contacts K_H or K_K when the slider A (i.e. the moving carriage K_U on Fig. 2) reaches either of the two limiting positions, A_H or A_K, on the scale. The printing drums, D, which records the magnitude of the compensated signal by

Card 2/6

9.6000 (1089, 1139, 1331)

28953
S/146/61/004/003/002/013
D217/D301

AUTHORS: Platunov, Ye.S., Chumak, E.I.

TITLE: Automatic electronic potentiometer of increased accuracy

PERIODICAL: Izvestiya vysshnikh uchebnykh zavedeniy. Priboro-stroyeniye, v. 4, no. 3, 1961, 19 - 23

TEXT: The paper describes a prototype instrument developed from the commercial potentiometer ЭПП-09 (EPP-09) and suitable for measuring e.m.f.'s of thermocouples used in wide range temperature measurements. The instruments scale is 2mV, range 0 - 48 mV, and the accuracy not less than ± 0.02 (1 + 0.05 E) mV. The increased accuracy results from the inclusion in the measuring bridge circuit of a calibrated signal-compensating circuit comprising 23 steps. The excess and compensated signals are registered on one chart, the former by a moving carriage with a pen, and the latter by a printing drum located at the edge of the chart. Fig. 1 shows

Card 1/6

Method for rapid measurement ...

Legend to Fig. 1: scheme of the calorimeter, 1) specimens, 2) metal blocks, 3) heating conductor, I) metal core of the calorimeter, II) heat insulation.

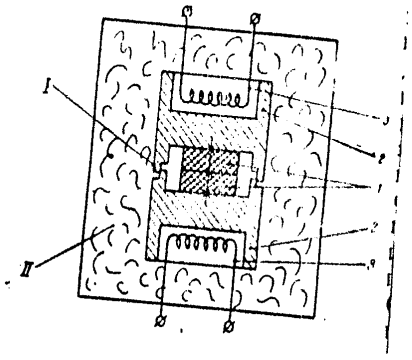


Fig. 1

Card 4/4

perimental technique are also discussed, e.g. the determination of changes in the temperature of the two specimens with time is described besides the determination of the drop in temperature of the specimens given at the beginning. A relation similar to (11) which had been successfully applied, is given for calculating the coefficient of thermal conductivity by this change in temperature with time. The above method allows measurements of temperatures ranging from 20° to 350°C; the experimental error lies exactly within the above range. The calorimeter described here, was also tested for temperatures between -80°C and 1000°C. This system proved to be very suitable. The publication of this article was recommended by the Kafedra teplovykh i kontrol'no-izmeritel'nykh priborov (Department of Heat and Control Measuring Instruments). There are 2 figures, 1 table, and 6 Soviet-bloc references.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: June 30, 1960

obtained the following practical relation for the coefficient of thermal conductivity:

$$a = \frac{\delta}{\Delta t_1 + \Delta t_2} \cdot \frac{\partial t(0,\tau)}{\partial \tau} \qquad (11)$$

where δ is the thickness of the two plates, Δt_1 and Δt_2 the temperature gradients on the two plates, and τ the time. Theoretical considerations which are based on the equation for the heat balance of the system, show that the temperatures of the core of the calorimeter and consequently also of the specimen change exponentially as had been expected. In contrast to similar methods the time of heating here depends on the temperature coefficient k, on the heat capacity of the core of the calorimeter, and the heat source. Hence the necessity for introducing a correction. The author also discusses the elimination of distortions in the homogeneity of the temperature field in the specimen by a suitable design of the calorimeter, and by considering the temperature dependence of the parameters of the materials examined. These theoretical considerations showed that formula (11) can be used if the drop in temperature of the specimens does not exceed 20°C. The error here does not exceed 2-3%. Details of ex-

20046

9.4300 (and 1143, 1160, 1150)

S/146/61/004/001/010/016
B104/B215

AUTHOR: Platunov, Ye. S.

TITLE: Method for rapid measurement of thermal conductivity of heat insulating and semiconductor materials in a wide temperature range

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 1, 1961, 84-93

TEXT: The experimental arrangement of Fig. 1 for the determination of thermal conductivity of nonmetals is discussed in the first part. Formulas for calculating the coefficient of thermal conductivity from the data obtained with this experimental arrangement, are then derived. The author proceeds from the following assumptions: the temperature in the specimen changes exponentially; thermal flux and separating face between the two plates to be studied (Fig. 1) are at right angles; the heat exchange in the lateral faces of the specimens is neglected and the resistance inverse to the thermal flux of the interface is negligibly small as compared to the total resistance of the specimen. Thus the author

Card 1/4

PLATUNOV, YE. S.

"Instruments for heat-physical tests, developed in the Leningrad Institute of Precision Mechanics and Optics."

Report presented at the 1st All-Union Conference on Heat- and Mass- Transfer, Minsk, BSSR, 5-9 June 1961

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200023-6

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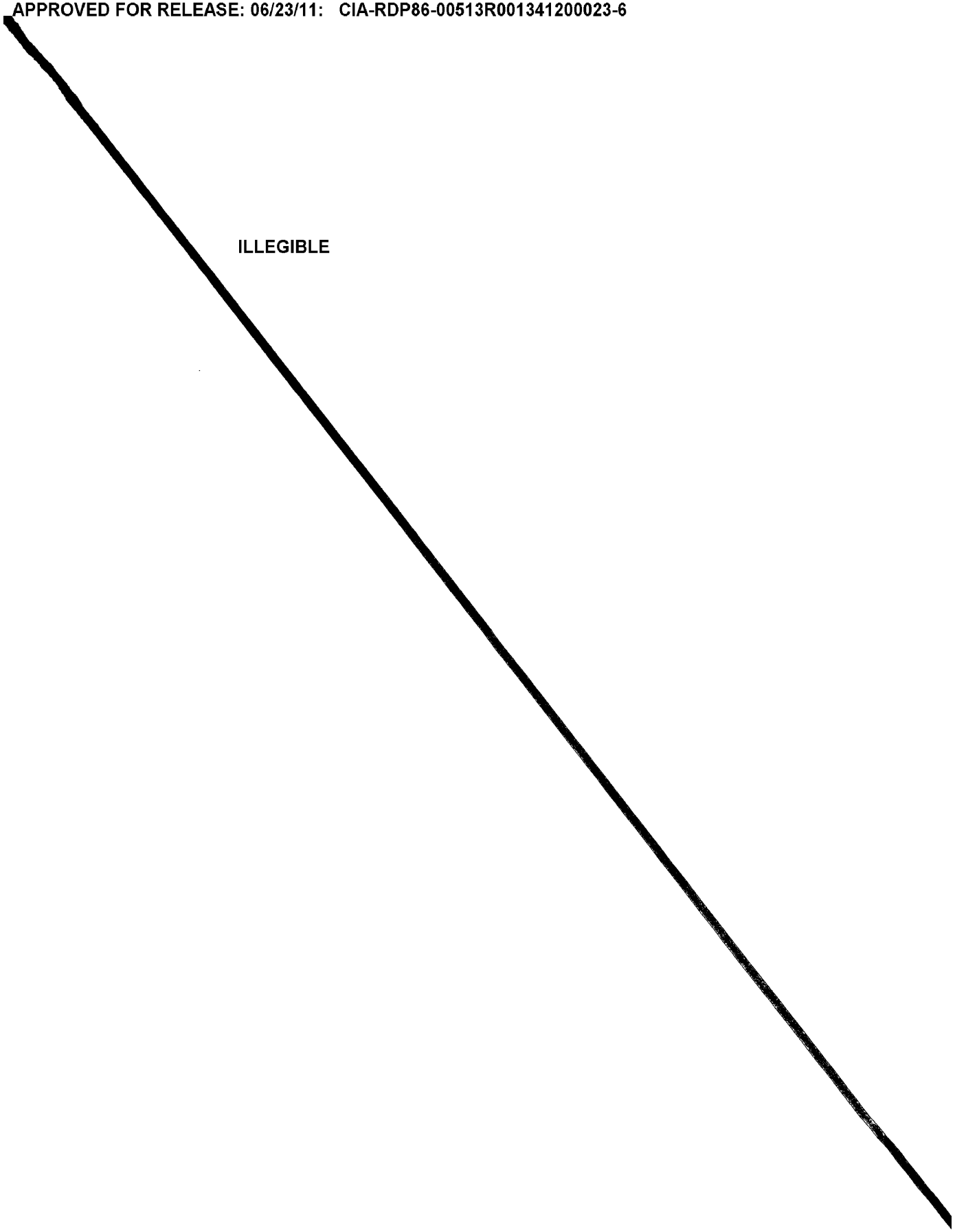


SOV/146-1-1-17/22

Assembly for Conductive Hardening of Plate Glass Products in Continuous Flow Conditions

Metallic heating furnace, conductive hardening plates and 1 screened thermoelement. The metallic furnace serves to heat the products until hardening temperature and differs sharply from those normally in use now. The metallic plates canalize the thermal energy of the electric heating coils and transmit it via radiation to the glass. In contrast to the normal hardening furnaces, the new furnace is equipped with a screened thermoelement, with the help of which temperature control of the products is possible throughtout the hardening temperature range. A screened thermoelement hangs loosely on thin suspenders in the central part of the furnace between a hot plate and the product. The thermoelement can serve to record the temperature of the products. Working constantly, the assembly consumes a rated 10 kW. Heating from standstill

Card 2/3

SOV/146-1-1-17/22

AUTHOR: Platunov, Ye. S., Senior Engineer

TITLE: A Device for Conductive Hardening of Plate Glass Products in Continuous Flow Conditions (Ustanovka dlya konduktivnoy zakalki izdeliy iz listovogo stekla v usloviyakh potoka)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Priborostroyeniye, 1958, Nr 1, pp 123-127 (USSR)

ABSTRACT: In the laboratory for thermal equipment LITMO - on order from Gusevskiy steklozavod imeni Dzerzhinskiy (Gusevskiy Glass Works imeni Dzerzhinskiy) - a process was developed for conductive hardening of plate glass products that differs from the current industrial process of air blast hardening. On the basis of the new technique, the laboratory constructed an experimental device of semi-industrial type for continuous production of hardened automobile glass. The device is designed for products under 320x320 mm in size. Three sections form the basis of the hardening plant:

Card 1/3

SOV/124-58-8-8916

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 85 (USSR)

AUTHOR: Platunov, Ye. S.

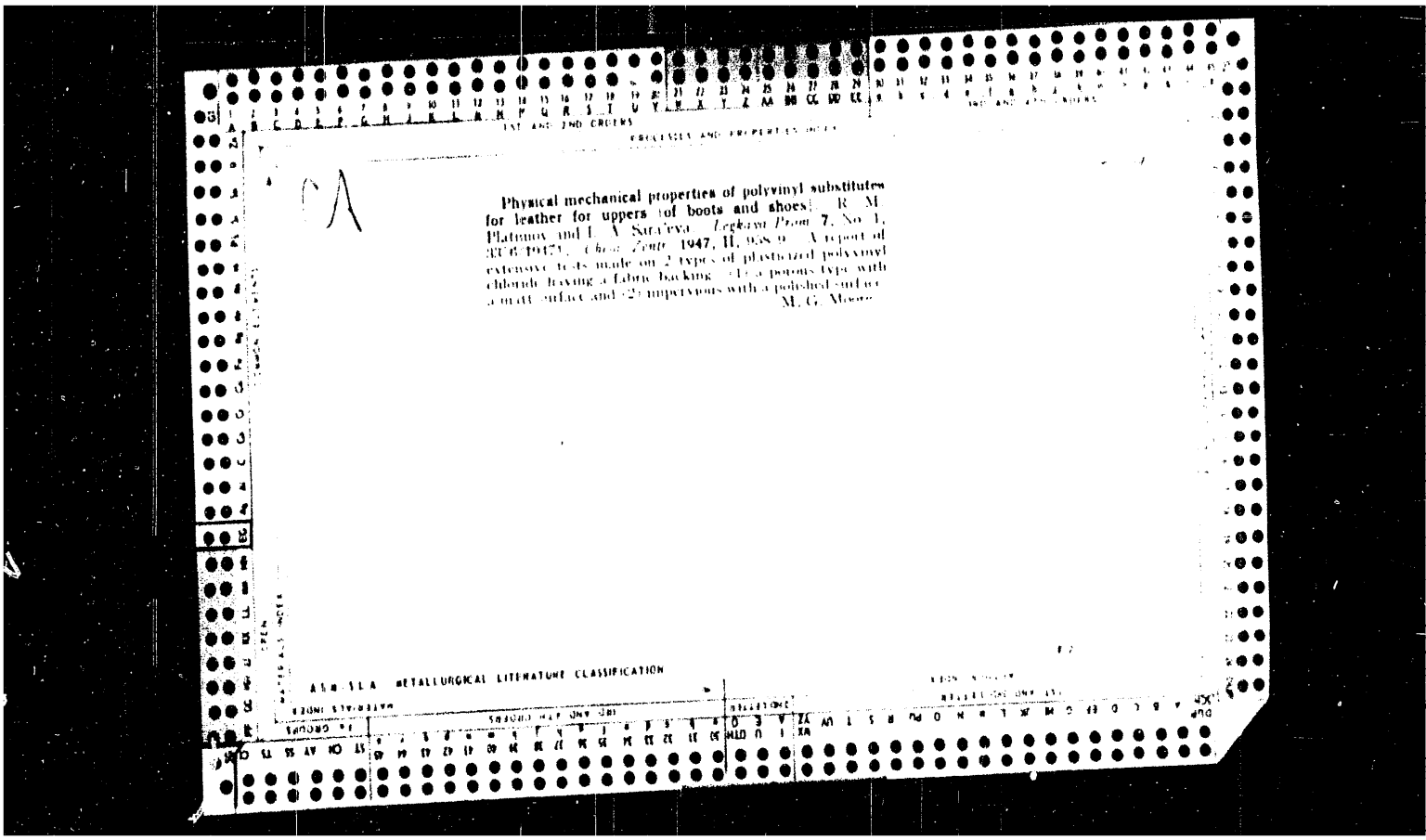
TITLE: Using a "Multiple-point" Method to Determine the Individual Coefficients of Heat Rejection From Bodies of the Simplest Shape (Metod "mnogikh tochek" dlya opredeleniya razdel'nykh koeffitsiyentov teplootdachi tel prosteyshey formy)

PERIODICAL: V sb.: Issledovaniya v obl. teplovykh izmereniy i priborov, Leningrad, 1957, pp 78-82

ABSTRACT: A method is proposed for determining the mean coefficients of heat rejection from the side and end surfaces of a finite-length straight circular cylinder and from the faces of a rectangular parallelepiped. The method involves cooling a body of similar shape in a liquid or gas medium maintained at a constant temperature and steady flow. Measuring the temperature at various points on the body during the process of its cooling makes possible the determination of the mean values of the coefficients of heat rejection from its surfaces---provided that its other thermal properties be known.

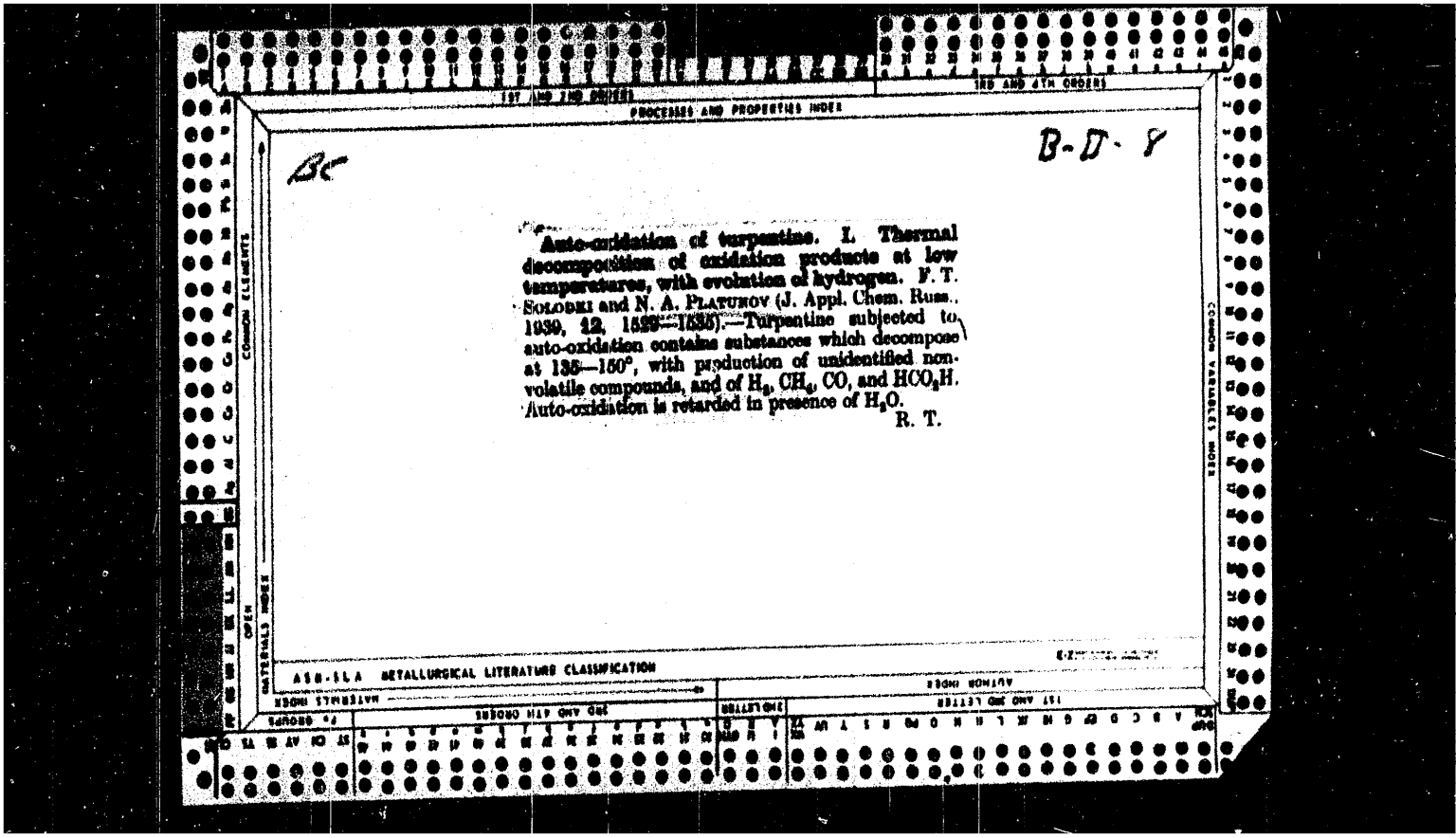
B. S. Petukhov

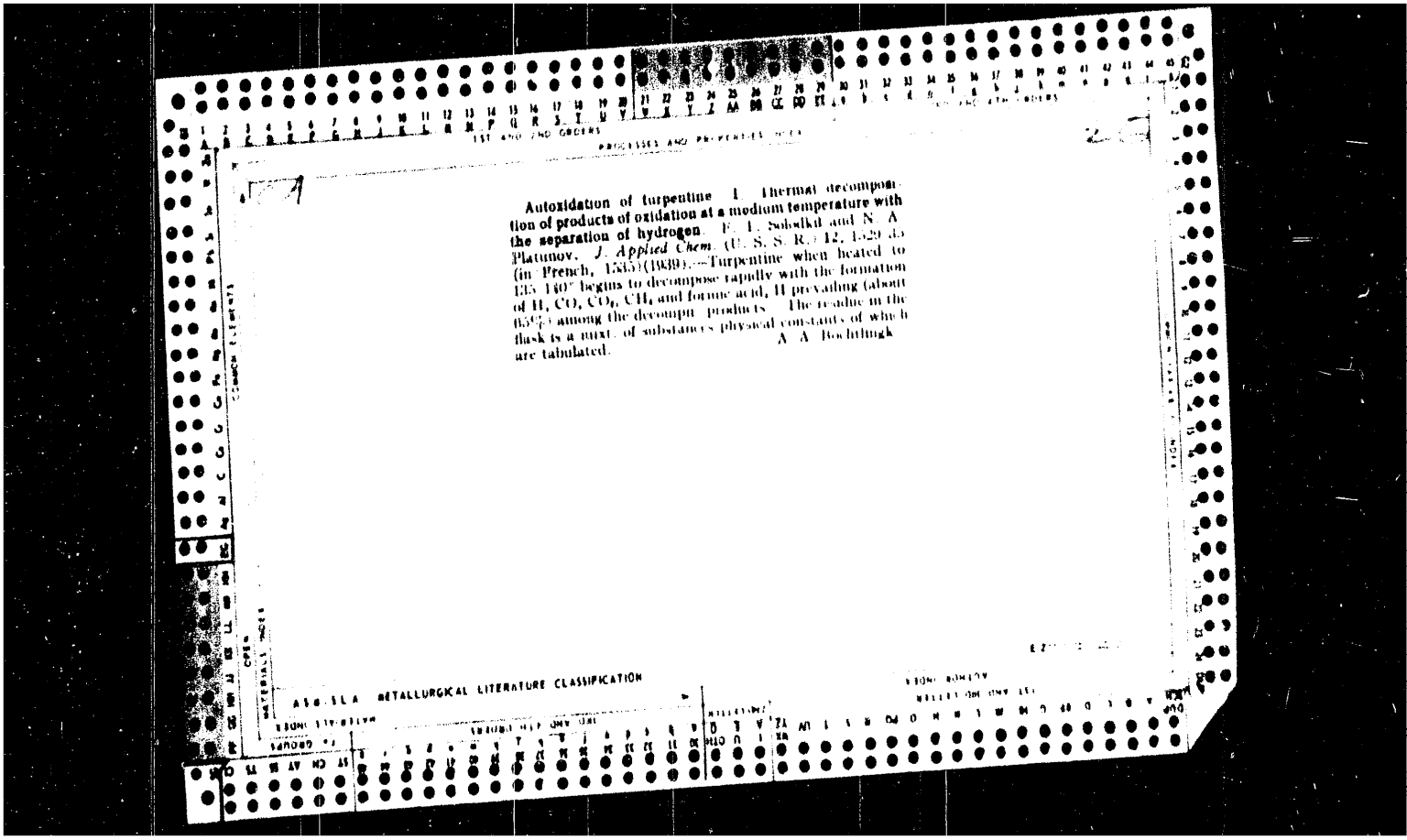
Card 1/1



Physical mechanical properties of polyvinyl substitutes for leather for uppers of boots and shoes. R. M. Platunov and I. V. Saraeva. *Legkaya Prom.* 7, No. 1, 37-8 (1947). *Chem. Zentr.* 1947, II, 958-9. A report of extensive tests made on 2 types of plasticized polyvinyl chloride leaving a fabric backing: (1) a porous type with a matt surface and (2) impervious with a polished surface. M. G. Moore

A54-51A METALLURGICAL LITERATURE CLASSIFICATION





Autoxidation of turpentine. I. Thermal decomposition of products of oxidation at a medium temperature with the separation of hydrogen. F. I. Sobolkii and N. A. Platunov. *J. Applied Chem.* (U. S. S. R.) 12, 1529-35 (in French, 1535)(1939).—Turpentine when heated to 135-140° begins to decompose rapidly with the formation of H, CO, CO_2, CH_4 and formic acid, H prevailing (about 65%) among the decompn. products. The residue in the flask is a mixt. of substances physical constants of which are tabulated.

A. A. Bochinski

ASTIA METALLURGICAL LITERATURE CLASSIFICATION

1. PLATUNOV, N. A.

2. USSR (600)

4. Carbonization

7. Retort productivity when carbonizing various types of raw material. Der. i lesokhim. prom. 1 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

PLATUNOV, N.A.

SUMAROKOV, Viktor Pavlovich; GORDON, Lev Vladimirovich; PLATUNOV, N.A., retsenzent; CHASHCHIN, A.M., retsenzent; SHESAREV, K.A., redaktor; FEDOROV, B.M., redaktor izdatel'stva; KARASIK, N.P., tekhnicheskiy redaktor

[Chemical and technical control in wood pulp production] Khimiko-tekhnicheskiy kontrol' lesokhimicheskikh proizvodstv. Moskva, Goslesbumizdat, 1956. 257 p. (MLRA 10:4)
(Woodpulp industry)

GORDON, Lev Vladimirovich; FEFILOV, Vladislav Vasil'yevich; SKVORTSOV, Semen Osipovich; ATAMANCHUKOV, Georgiy Dmitriyevich; PLATUNOV, N.A., retsenzent; CHASHCHIN, A.M., retsenzent; LIZUNOV, A.A., inzh., red.; PROTANSKAYA, I.V., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Technology of the wood-chemistry industries] Tekhnologiia lesokhimicheskikh proizvodstv. Izd.2., perer. Pod red. A.A.Lizunova. Moskva, Goslesbumizdat, 1960. 418 p. (MIRA 14:1)
(Wood--Chemistry)

PLATUNOV, M.

Carry out without hesitation nighttime passages on winged ships.
Rech. transp. 22 no.9:54 S '63. (MIRA 16:10)

1. Byvshiy kapitan "Rakety-23."

PLATUNOV, K. M. DECEASED 1963/3

c ' 1962

LEATHER, testing

see ILC

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200023-6

PLATUNOV, E. S.; YARYSHEV, N. A.

"Theoretical foundations of investigation methods for thermal parameters of materials in the monotonic temperature-variation regime."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

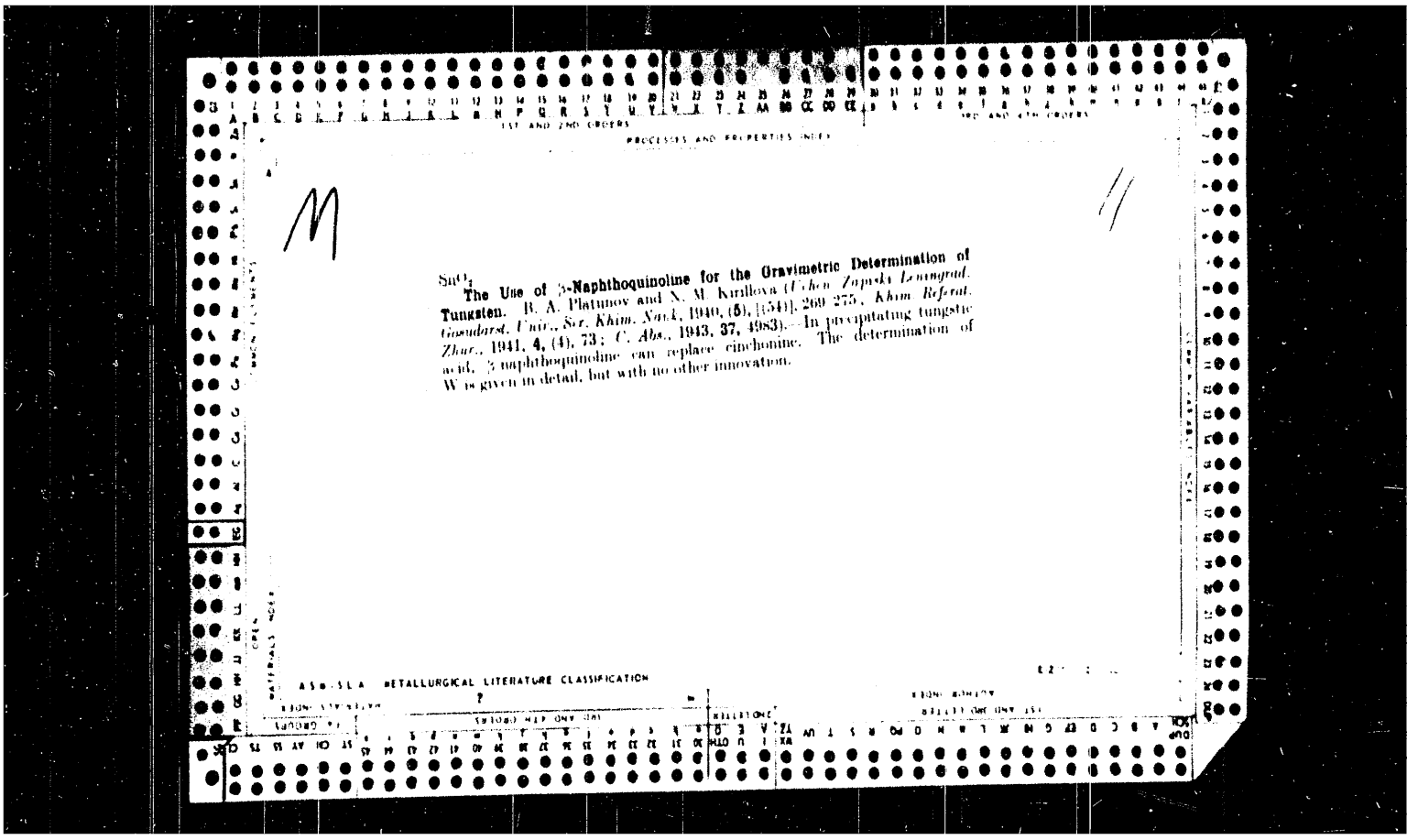
Leningrad Inst of Precision Mechanics & Optics.

DUL'NEV, G. N.; PLATUNOV, E. S.; KUREPIN, V. V.; BURAVOY, S. E.

"Some new methods and equipment for the investigation of the thermal properties of materials developed at Leningrad Inst of Precise Mechanics and Optics."

Leningrad Inst of Precision Mechanics & Optics.

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.



PROCESSES AND PROPERTIES INDEX

SnO_4

The Use of β-Naphthoquinoline for the Gravimetric Determination of Tungsten. B. A. Platunov and N. M. Kirilleva (*Chem. Zapiski Leningrad. Gosudarst. Univ., Sci. Khim. Sect.*, 1940, (5), [1541], 269–275; *Khim. Referat. Zhur.*, 1941, **4**, (4), 73; *C. Abs.*, 1943, **37**, 4983).—In precipitating tungstic acid, β-naphthoquinoline can replace cinchonine. The determination of W is given in detail, but with no other innovation.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PLATUNOV, B. A.

USSR/Chemistry - Analytical, Jul/Aug 52
Meeting

"Conference on Analytical Chemistry in the City of Gor'kiy," V.I. Kuznetsov

Zhur Anal Khim, Vol 7, No 4, pp 253, 254

Regional conference held 4 - 6 June 52, called by Gor'kiy State U. Forty reports were heard, a number of them devoted to the theory of the action of org reagents, and to their utilization in analysis. V.I. Kuznetsov and L.M. Kul'berg reported on the effect of the peculiarities of the molecular structure of an

(1) 261T27

org reagent on that reagent's reaction capability. B.A. Platunov pointed out that the completeness of the pptn of W by org reagents is detd by the nature of the precipitator and the state of the W in soln. V.M. Peshkova spoke on the ease with which dioxime complexes of Ni could be extracted during the colorimetric detection of Ni in the presence of Co and other elements. A.K. Babko reported on utilizing silicomolybdic acid and phosphomolybdic acid in analysis. V.B. Avilov was heard on the physicochem bases of the iodometric detection of As, Sb, Fe, Sn, Cr, and V, and on the theoretical bases of certain oxidizing-reducing reactions. A.M. Vasil'ev, V.F. Torpova and A.A. Busygina reported on the possibility

(2) 261T2

261T27

of separating Cu, Cd, and Zn by ionic exchange on Wofatit R with solns containing thiosulfate and acetates. Reports were also presented on sanitation-hygienic analysis.

PLATUNOV, B.A.; DEITCH, A.Ye.

Application of methylene blue to the gravimetric determination of tungsten.
Vestnik Leningrad. Univ. '50, No.6, 45-63. (MLRA 3:10)
(CA 47 no.22:12117 '53)

PLANULOV, S. A.

Tungsten

Modern concepts of the chemistry of precipitation of tungsten with organic precipitants. Uch. zap. Len. un., No. 150, 1951.

9. Monthly List of Russian Accessions, Library of Congress, November 1952. 1953, Uncl.

PLATUNOV, B. A.

Chemistry, Analytical - Quantitative

Chemism of reactions of certain gravimetric determinations with the use of salts of organic bases. Vest. Len. un. 7, No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

PLATUNOV, B. A.

Tungsten

Chemism of reactions of certain gravimetric determinations with the use of salts of organic bases. Vest. Len.un. 7, no. 12, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

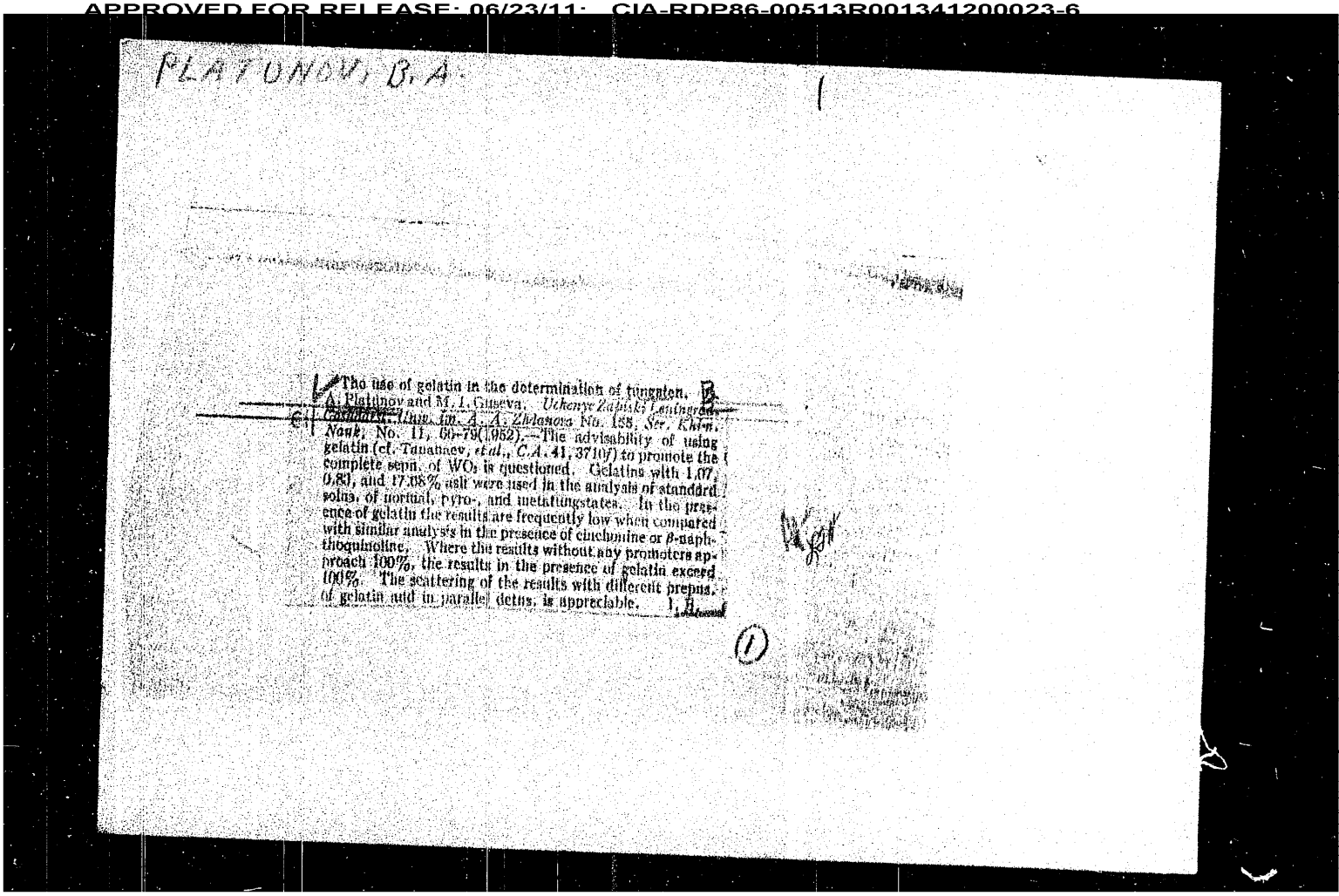
PLATUNOV, B.A.

4

USSR.

Current views on the processes for the precipitation of tungsten with organic precipitants. B. A. Platunov. *Uch. zap. Zaporizh. Gos. ped. in-ta* [Scientific Notes of the Zaporozhye State Pedagogical Institute], No. 150, *Sec. Khim. Nauk*, No. 10, 3-8(1957). A review (11 ref.) of the mechanisms proposed for compd. formations between WO_3 and α-naphthylamine, benzidine, *anti*-1,5-di-(*p*-methoxyphenyl)-1-hydroxylamino-3-oximino-4-pentene, 8-hydroxyquinoline, and tetraphenylarsonium chloride.

C. H. Fuchsman



PLATONOV, B.A.

1

The use of gelatin in the determination of tungsten. B. A. Platonov and M. I. Guseva. *Uchenye Zapiski Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 158, *Ser. Khim. Nauk*, No. 11, 66-79(1952).—The advisability of using gelatin (cf. Tananaev, *et al.*, *C.A.* 41, 3710f) to promote the complete sepn. of WO_3 is questioned. Gelatins with 1.07, 0.80, and 17.08% ash were used in the analysis of standard solns. of normal, pyro-, and metatungstates. In the presence of gelatin the results are frequently low when compared with similar analysis in the presence of cinchonine or β-naphthoquinoline. Where the results without any promoters approach 100%, the results in the presence of gelatin exceed 100%. The scattering of the results with different preps. of gelatin and in parallel detns. is appreciable. I. R.

(1)

PLATUNOV, B.A.; MIKHAYLOVSKAYA, Ye.P.

Use of tetramethylthionine chloride (methylene blue) for gravimetric deter mination of zinc. Uch.zap.Len.un.169: 189-202 '53.
(Methylene blue) (Zinc) (MLRA 9:6)

PLATUNOV, B.A.; GUSEVA, M.I.

Use of gelatin in gravimetric determination of tungsten. Uch. zap.Len.un. no.155:66-79 '52. (MLRA 9:1)
(Gelatin) (Tungsten)

TITKOV, N.P.; BOGDANOVA, Z.S.; GALAKTIONOVA, K.N.; KUROVA, M.D.; LAKOTA, B.M.; OZOLIN, L.T.; Prinimali uchastiye: CHRKOVA, K.I.; ASHITKOV, Yu.R.; SMIRNOV, Ye.A.; PLATUNOV, A.A.; GALICH, V.M.; PATKOVSKAYA, N.A.; VLODAVSKIY, I.Kh.; GORLOVSKIY, S.I.

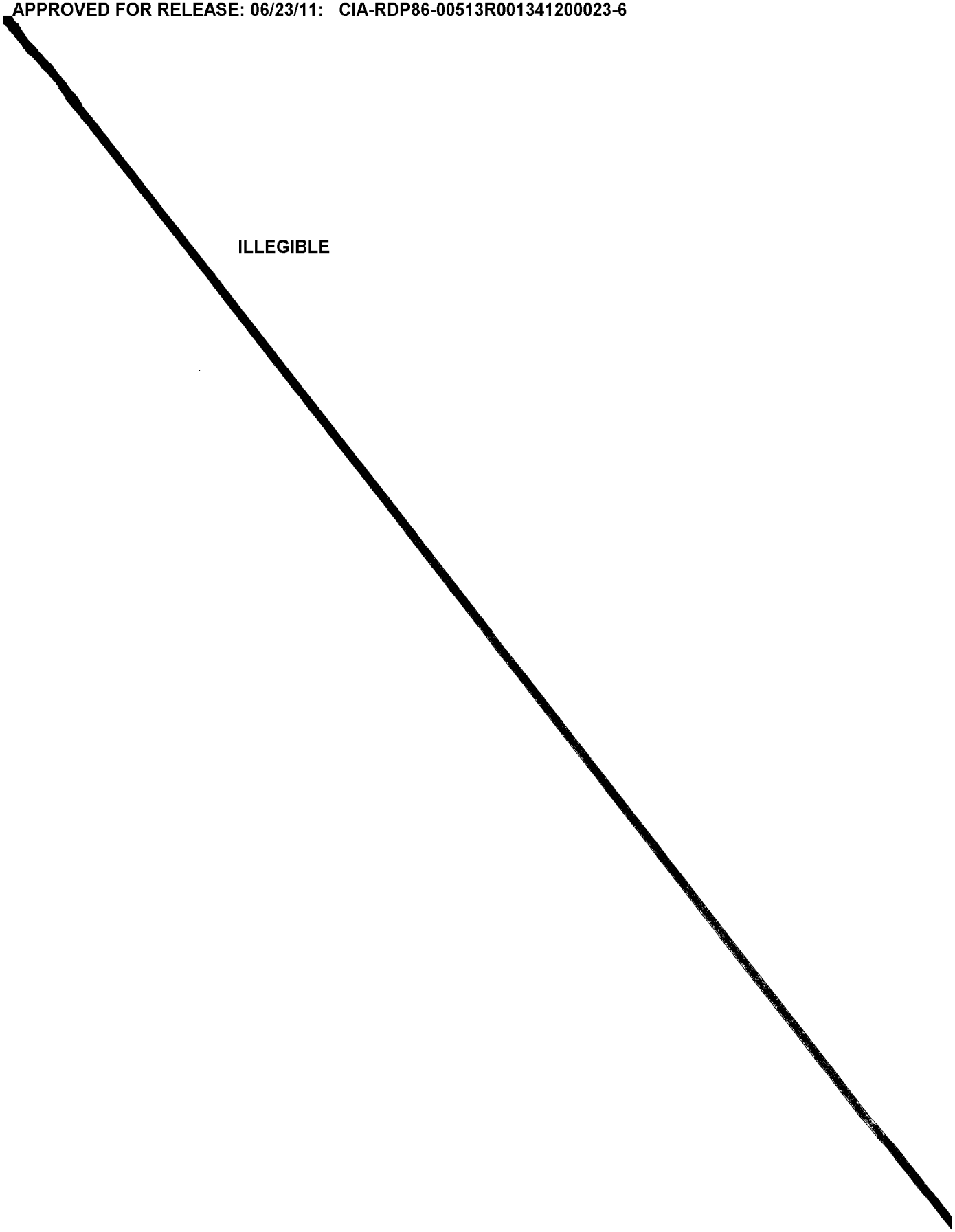
Outlook for introducing the flotation of ferrous metal ores. Gor. zhur. no.9:57-62 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh, Leningrad. (Flotation) (Iron ores) (Manganese ores)

OZOLIN, L.T.; KAZENNOV, M.N.; PLATUNOV, A.A.

Flowsheets of regrinding and flotation of nonmagnetic products at the Olenegorsk Plant. Obog. rud 6 no.3:12-17 '61. (MIRA 14:11)
(Olenegorsk--Ore dressing)

ILLEGIBLE



PLATTNER, H.

Odonata in the south of Transylvania. Comunicarile AR 13 no.11:969-976 N'63.

1. Comunicare prezentata de academician W.Knechtel.

PLATTHY, P.

New trends in the development of iron and metal structures. 5. Composite structures. p. 249.

MELYEPITESTUDOMANYI SZEMLE. (Kozlekedes- es Kozlekedesepitestudomanyi Egyesulet) Budapest, Hungary, Vol. 9, no. 6, June 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

PLATTHY, Pal, dr., okleveles mernok, muszaki egyetemi adjunktus

Economical and quickly preparable joint for composite beams.
Melyepitestud szemle 12 no.9:402-403 S '62.

1. Epitoipari es Kozlekedesi Muszaki Egyetem, Budapest.

DEBRECZENY, Elmer, okleveles mernok; HALASZ, Otto, dr., docens, a muszaki tudomanyok kandidatusa; PLATTHY, Pal, dr., adjunktus; VISONTAI, Jozsef, tanarseged

Aerodynamic model test of tubular bridges. Melypitestud szemle 13 no.1:35-41 Ja '63.

1. VEGYTERV osztalyvezetoje (for Debreczeny). 2. Epitoipari es Kozlekedesi Muszaki Egyetem I. Hidepitesi Tanszek (for Halasz). 3. Epitoipari es Kozlekedesi Muszaki Egyetem I. Hidepitesi Tanszek (for Platthy). 4. Epitoipari es Kozlekedesi Muszaki Egyetem I. Hidepitesi Tanszek (for Visontai).

PLATTHY, Pal, dr., okleveles mernok, muszaki egyetemi adjunktus

The state of the steel structure industry in Yugoslavia.
Melyepitestud szemle 13 no.8:349-353 Ag '63.

1. Epitoipari es Kozlekedesi Muszaki Egyetem I. Hidepitesi Tanszek.

FABER, Miklos; PLATTHY, Pal, dr.

Design of the Erzsebet Bridge. Musz elet 19 no.24:1,12 19 N '64.

FABER, Miklos; PLATTHY, Pal, dr.

Construction works of the Erzsebet Bridge. Musz elet 20 no.3:10
11 F '65.

PLATTHI, G.

RUMANIA/Chemical Technology. Chemical Products and Their Applications. Electrochemical Industries. Electroplating. Galvanic Cells.

Abs Jour: Ref Zhur-Khim., No 8, 1959, 28116.

Author : Magymas, G. and Platthi, G.
Inst :
Title : Current Linkage in the Electrolytic Refining of Copper and Its Elimination.

Orig Pub: Rev Chim, 9, No 3, 134-138 (1958) (in Rumanian with German, English, French, and Russian summaries)

Abstract: The authors have investigated the causes responsible for the drop in current efficiency to 50-60% and have found that the greatest current losses are caused by short circuits formed between the electrodes. Careful control of the baths and immediate

Card : 1/2

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RUMANI./Chemical Technology. Chemical Products and Their Applications. Electrochemical Industries. Electroplating. Galvanic Cells. H

Abs Jour: Ref Zhur-Khim., No 8, 1959, 28116.

Author : Hagymas, G. and Platthi, G.
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Abstract: The authors have investigated the causes responsible for the drop in current efficiency to 50-60% and have found that the greatest current losses are caused by short circuits formed between the electrodes. Careful control of the baths and immediate

Card : 1/2

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PLATT, A.D.

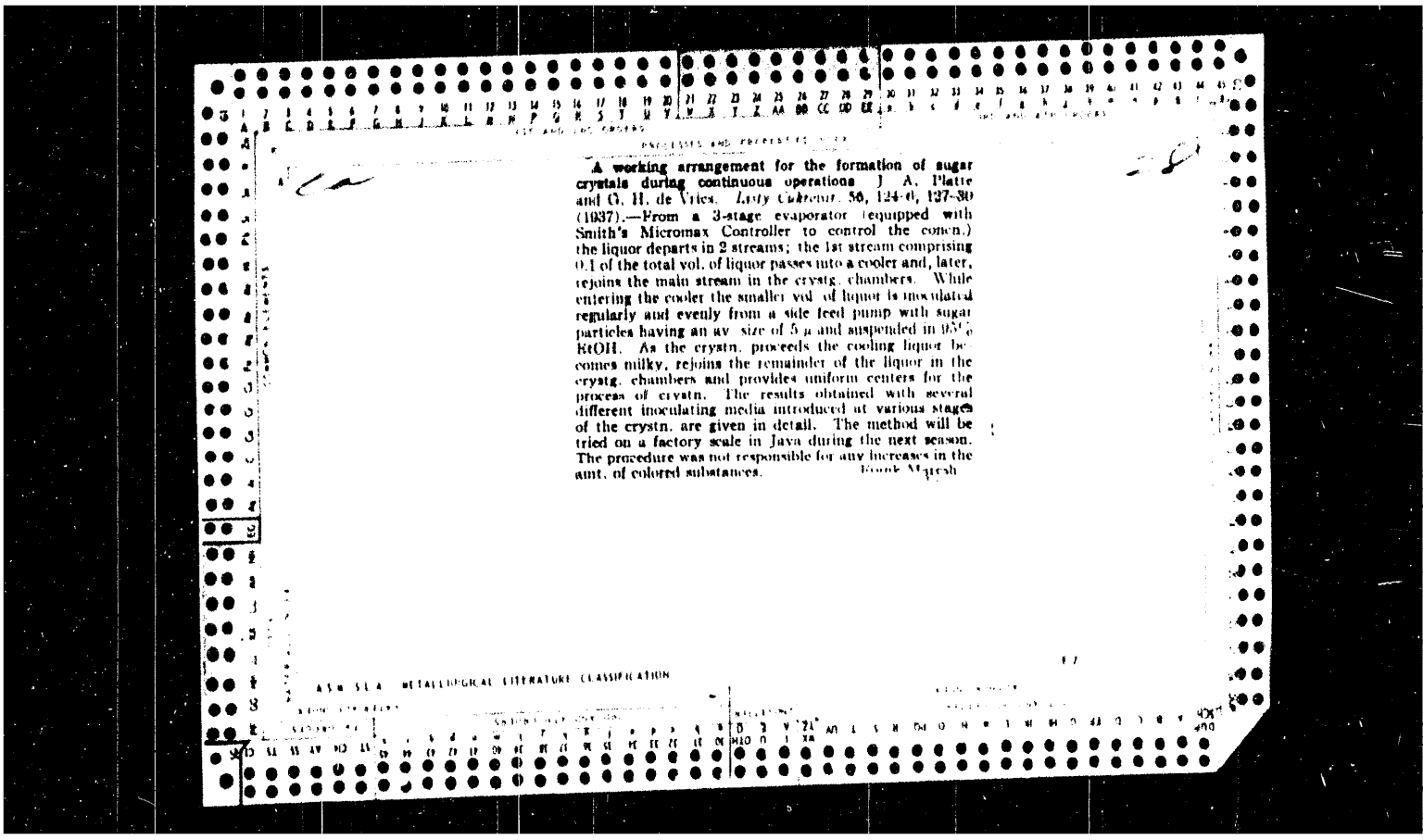
The time is ripe. Vsem. prof. dvizh. no.1:4-5 Ja '57.
(MIRA 14:9)

1. Federal'nyy predsedatel' profsoyuza transportnykh rabochikh Avstralii, chlen TSentral'nogo ispolkoma leyboristskoy partii shtata Novyy Yuzhnyy Uel's i predsedatel' organizatsionnogo komiteta leyboristskoy partii Avstralii.
(Trade unions)

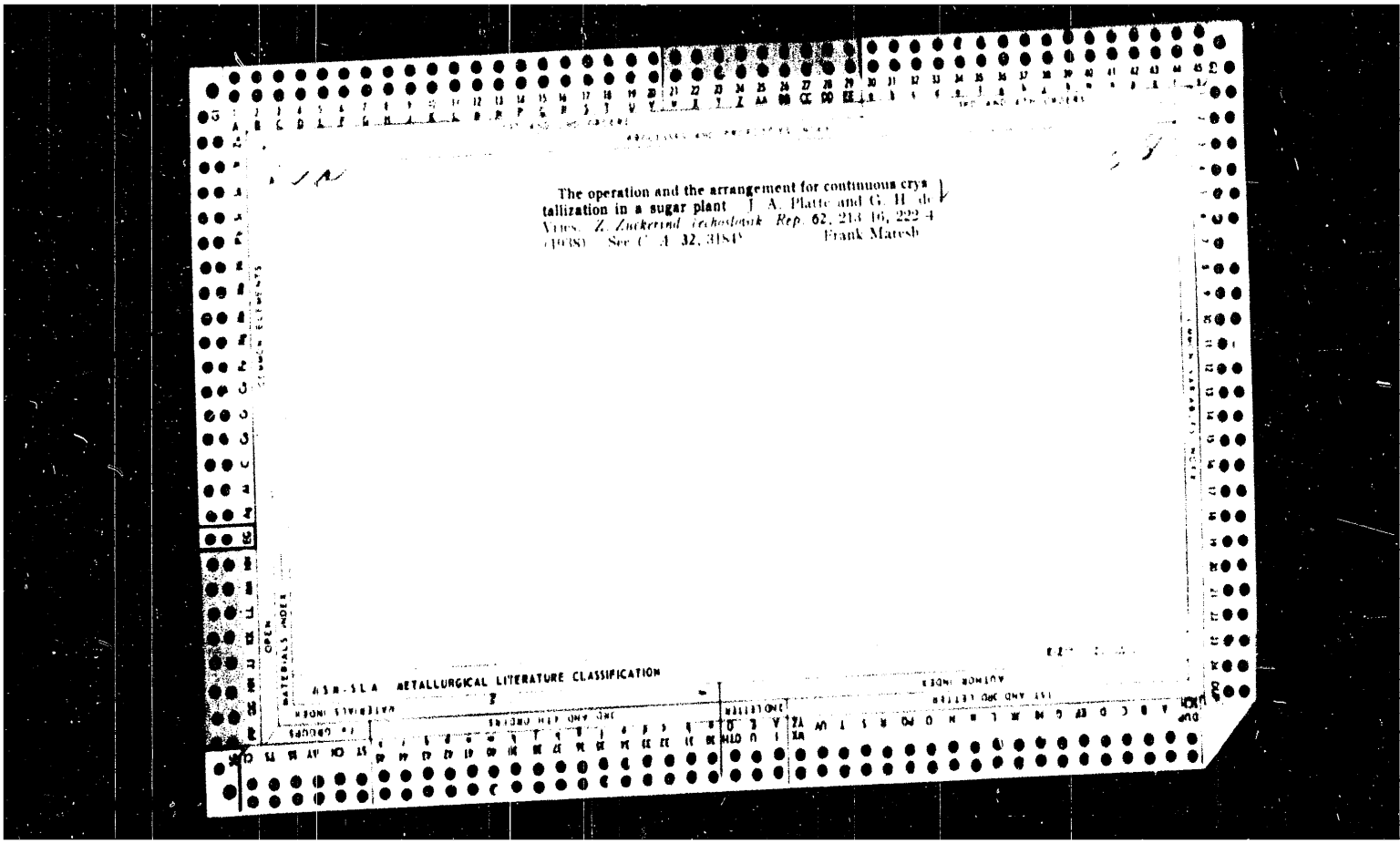
PLATSMAN, L.G.; BREYDO, V.A.

Hemodynamic and electrocardiographic changes under the influence of mud treatments at high mountain altitudes. Vop. kur., fizioter. i lech. fiz. kul't. 25 no. 6:499-501 N-D '60. (MIRA 14:2)

1. Iz kliniki fakul'tetskoy terapii Kirgizskogo meditsinskogo instituta (zav. - prof. M.Ye. Vol'skiy) I Issyk-Kul'skogo sanatoriya "Tamga" (nach. M.V. Mikhaylenko).
(BLOOD) (ELECTROCARDIOGRAPHY) (BATHS, MOOR AND MUD)



A working arrangement for the formation of sugar crystals during continuous operations. J. A. Platte and G. H. de Vries. *Lucty Cukercur.* 56, 124-6, 127-30 (1937).—From a 3-stage evaporator (equipped with Smith's Micromax Controller to control the concn.) the liquor departs in 2 streams; the 1st stream comprising 0.1 of the total vol. of liquor passes into a cooler and, later, rejoins the main stream in the crystg. chambers. While entering the cooler the smaller vol. of liquor is inoculated regularly and evenly from a side feed pump with sugar particles having an av. size of 5 μ and suspended in 95% EtOH. As the crystn. proceeds the cooling liquor becomes milky, rejoins the remainder of the liquor in the crystg. chambers and provides uniform centers for the process of crystn. The results obtained with several different inoculating media introduced at various stages of the crystn. are given in detail. The method will be tried on a factory scale in Java during the next season. The procedure was not responsible for any increases in the amt. of colored substances. Frank Marsh



The operation and the arrangement for continuous crystallization in a sugar plant J. A. Platte and G. H. de Vries. *Z. Zuckerind. tschechoslovak. Rep.* 62, 213-16, 222-4 (1938). See *C. A.* 32, 3184[9]. Frank Maresh

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SLABOKHOVA, Z. [Slabochova, Z.]; PLATSER, Z.; MASHEK, I.

Some experience in the treatment of patients with obesity.
Vop.pit. 20 no.3:12-16 My-Je '61. (MIRA 14:6)

1. Iz Instituta pitaniya, Praga, Chekhoslovakiya.
(CORPULENCE)